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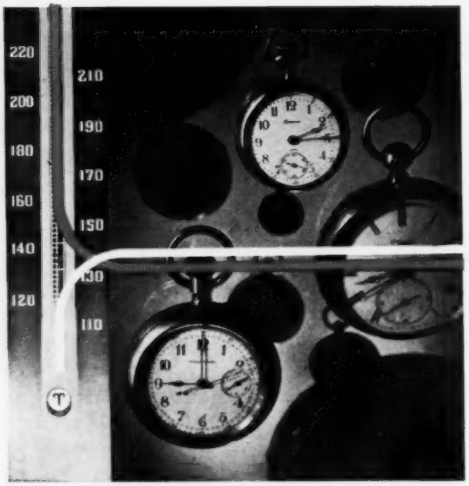

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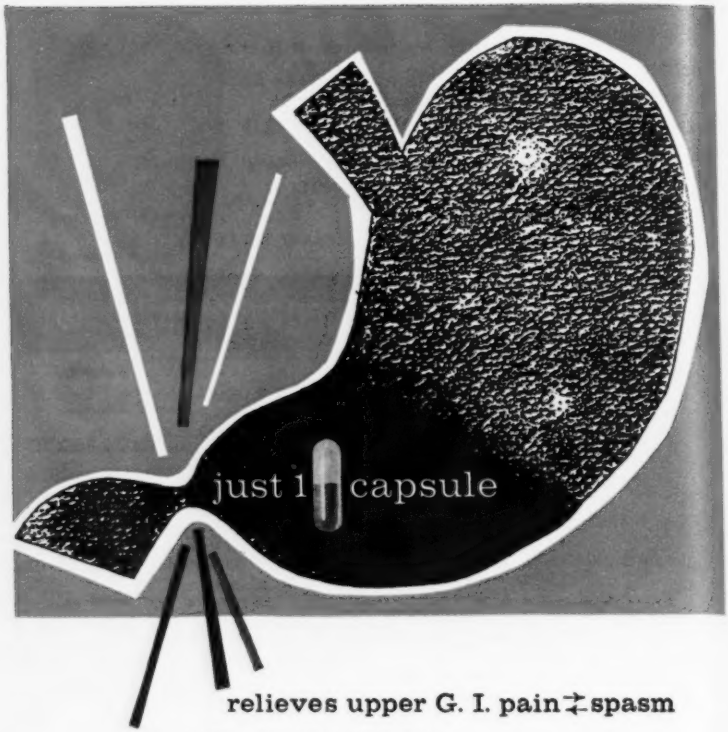

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EDITORIAL

After 50, Life Expectancy Hasn't Changed Much in Thousands of Years

Excepting deaths from epidemics, it is remarkable how, through the centuries, three score and ten remains the average span of life

---

JAMES M. NORTHINGTON, M.D., *Editor*

Writers frequently state that within a few more decades the average human life expectancy will be as high as 100 years.

The increase in life expectancy for the population as a whole has been brought about by the saving of life in infancy and childhood. Fifty years ago it was commonly said that two out of three breast-fed babies lived, and that two out of three bottle-fed babies died. It was also said that a widower was like a baby in that, "he cries the first six months, the next six months he begins to take notice, and it is mighty hard to get him through the second summer." There has been a great change in the survival rate of the babies, and probably also in that of the widowers.

Five thousand years ago an acute observer remarked, "The days of our years are three score and ten, and if by reason of strength they be four score years, then is their strength labour and sorrow." Note that this is said of those already arrived at man's estate. It seems likely that the "labour and sorrow" of the ten years after seventy was mostly from prostatic troubles, for which nothing could be done until thousands of years later.

Several months ago while looking

through a volume of *The Best of the World's Classics,* published in 1905 and edited by Henry Cabot Lodge, it occurred to me that the writers of these Classics lived to be rather old. This led to the discovery that these writers lived, on an average, 65½ years between the years 354 A.D. and 1905 A.D.

It then occurred to me to consult another series in my library to find out how old the greatest statesmen and orators got to be. Covering the period from 432 B.C. to 1906 A.D., I learned that the average life span of those regarded as the greatest statesmen and orators was 59.9 years. It is to be noted that these distinguished persons lived longer before the appearance of the historically devastating epidemic diseases, bubonic plague, cholera, smallpox, typhus, malaria, diphtheria, typhoid and influenza. Taking the deaths from these epidemics into consideration, it is remarkable how close the agreement is with the "three score years and ten" of the Hebrew Psalmist.

It is difficult to ignore the abundant evidence all around us testifying to the fact that everything that lives —man, other animals and plants— has a fairly definite period of years, months or days of growth, a period of maintenance at a certain level, then a period of decline. How can we escape the conclusion that the attainment of an average age of 100 years would be the greatest calamity that ever befell the world? However good our intention, there would not be enough persons in the productive age to feed, clothe, house and minister to the young in non-age and to the old in dotage.

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ORIGINAL ARTICLE

Tonsillectomy and Adenoidectomy in Review

The important aspects of this most commonly performed operation are reviewed in the light of modern medical concepts

SAMUEL L. FOX, M.D.,* *Baltimore, Maryland*

The number of tonsillectomies performed annually in the United States in the 1930s was considerable higher than the number now being performed, in spite of the interim increase in population, in total hospital beds and in hospitalization insurance. Also, the average age at which such surgery is being performed has risen over the same period of time, so that most children are now at least of school age.[1] This is a wholesome situation, since it would indicate that now we recognize that tonsils, unless seriously infected, do exercise a protective function and do have much to do with the development of immunity—unless that is prevented by the early and indiscriminate use of sulfonamides and antibiotics.[2] With the application of stricter indications for surgery, fewer cases are operated upon needlessly or too early.

PATHOLOGY

There are five types of pathology which call for removal of the tonsils and adenoids. These are:

1. Repeated acute attacks of infection of the tonsils and adenoids, even though they may respond to antibiotics.
2. Persistent chronic or subacute

*Departments of Otolaryngology, University of Maryland School of Medicine and South Baltimore General Hospital.

1. This study will be published shortly.

2. Galloway, T. C., *J.A.M.A.*, 163:519-521,1957.

infection of the tonsils and adenoids, with impairment of the general health of the patient.

3. Recurring attacks of acute suppurative or catarrhal otitis media, associated with tonsillar and adenoid infection, especially when there is loss of conduction hearing.
4. Postnasal obstruction with facial and palatal deformity (adenoid facies) and its concomitant effects on the child.
5. Focal infection, where no other systemic disorder can be found which could produce the condition under study, and especially where a relationship can be established between flare-ups of the disease and attacks of acute tonsillar and adenoid infection. Some allergic diseases come under this heading, as well as many infectious and toxic disorders.

Since indiscriminate use of the antibiotics may increase many-fold the susceptibility to recurrent infection,[2] it is far better to remove the tonsils and adenoids once they have succumbed to infection and no longer can exercise any protective function.

"FOCAL INFECTION"

"Focal infection" in recent years has fallen into disrepute. Now the pendulum appears to be moving into a position of sensible balance. Coleman,[3] Rhoads,[4] Kolmer[5] and others have reaffirmed the validity of the concept of focal infection. Indications for removal of a suspected focus should be investigated carefully, as this is the area where most errors in judgment occur.

The other stated indications for tonsillectomy and adenoidectomy are widely accepted as standard throughout the profession.

PRE-OPERATIVE PREPARATION

Children should not be taken to the hospital unawares, or as "going visiting" or "going shopping." Both patients and child should be told just what is to take place.

A thorough physical examination is requested of the family physician or pediatrician, and a urinalysis, a white blood count and differential, and a hemoglobin determination are made just prior to the operation. Other tests are made as are indicated or requested by the physician. Operation is cancelled if the hemoglobin is below 10 gm., the white blood count above 10,000 without known cause, there is an abnormal differential, or albumin or sugar is found in the urine; and when any disease is found which could contra-indicate anesthesia or a surgical procedure.

Bleeding and clotting time determinations are made only on those with a history of a bleeding tendency. All patients are queried about such a possibility.

Where Vitamin K and C deficiences exist, medication is given for an adequate period before operation.

Antibiotics should be administered for from 4 to 10 days pre-operatively in cases with persistent infection. Rhoads et al[6] found the incidence of bacteremia immediately following tonsillectomy to be 28.3% in a control group, and only 5.9% in a group who received penicillin daily for 4 to 10 days prior to tonsillectomy. Beta hemolytic streptococci were found in 57.35% of the cultures made

3. Coleman, G. H., *J.A.M.A.*, 151:280-284,1953.
4. Rhoads, P. S., *Laryngoscope*, 63:249-261,1953.
5. Kolmer, J. A., *Modern Med.*, 22:177-190,1954.
6. Rhoads, P. S., et al., *J.A.M.A.*, 157:877-881,1955.
7. Rhoads, P. S., et al., *Ann. Int. Med.*, 32:30,1950.

from ground-up excised tonsils of the patients receiving no antibiotics. Penicillin is effective in eliminating the beta hemolytic streptococcus carrier state.[7] Many cases have been reported in which the relationship between post-operative bacteremia (after tonsillectomy or after tooth extraction) and the onset of bacterial endocardiis and septicemia appeared to be direct in persons with previous valvular damage.[8-10]

Atropine is given 45 minutes before operation, in dosages as outlined, varying the dosage only when the patient is larger or smaller than usual for the stated age. Pre-operative sedation in young children is neither indicated nor desirable. In adolescents and adults, sedation is administered along with atropine. Morphine is still the drug of choice for this purpose.

ATROPINE DOSAGE SCHEDULE

AGE	DOSE
Under 1 year	None
Under 3 years	1/600 grain
Under 4 years	1/400 grain
Under 7 years	1/300 grain
Under 12 years	1/200 grain
Under 18 years	1/150 grain
Over 18 years	1/100 grain

In a few cases, one or more doses of chlorpromazine were administered during the forenoon preceding operation. The children for the most part arrived in the operating room more confused than sedated and no advantage was realized during the induction of the anesthetic. In every instance, a major disadvantage was encountered in the recovery room, where the time for reaction from anesthesia was prolonged. In addition, severe shock may ensue during anesthesia from the anti-pressor effects of this and similar drugs.

8. Abrahamson, L., *Brit. M. J.*, 2:8,1931.
9. Weiss, H., *Arch. Int. Med.*, 54:710,1934.
10. Rock, J. F., *J. Iowa M. Soc.*, 34:10,1944.

ANESTHESIA

Our patients are divided into two main groups:

1. Children under the age of 11 or 12 years, whose induction is with Vinethane (usually), anesthesia carried on by open ether administration through a Davis mouth gag, and

2. Persons over 11 or 12 years, whose induction is with pentothal and curare (or a curare substitute), supplemented by oxygen through the Davis mouth gag, then with 2% Xylocaine containing 1:50,000 suprarenin injected locally; or they are operated upon completely under local anesthesia with the Xylocaine solution. In either event, the operation on adults is really done under local anesthesia, but in a great many of them pentothal and curare are used basally and for hypnosis during the operation.

Intubation is not regularly performed in these cases. However, an intubation tube is always in readiness for use, should laryngeal spasm occur. In the past 10 years, in 1000 cases operated upon by this technique, it has been necessary in only 1 case to intubate during the operation.

SURGICAL TECHNIQUE

The Davis mouth gag is routinely employed (except in cases operated upon entirely under local anesthesia), as this gag provides excellent exposure, a ready means of administration of gaseous compounds (ether, nitrous oxide, oxygen, etc.) by the open method, and a good airway.

Adenoidectomy is done first, by the use of Beckman curettes, fol-

lowed by exposure of the nasopharynx with the Love retractor and subsequent excision of any remaining lymphoid tissue. The nasopharynx is then packed with sponges until hemostasis is complete.

Tonsillectomy is carried out entirely by dissection, using the double-edged Worthington semi-sharp tonsil knife and long-handled Metzenbaum scissors. Usually, bleeding points are ligated with #0 plain catgut free ties, using a slip knot. Any inaccessible bleeding points and any areas with multiple points of bleeding are ligated with #0 atraumatic, plain catgut figure-of-8 sutures. When hemostasis is complete and both the adenoid bed and the tonsillar fossae are dry, the gag is removed, the patient is placed on a stretcher in a head-low prone position and taken to the recovery room, where he remains until fully reacted, after which he is returned to his ward or room. (Adults receiving pentothal are usually allowed to remain on their backs and an airway is placed in the mouth until they have reacted).

No chemical cauterants or dessicants are employed to control bleeding. Occasionally a few drops of suprarenin solution are used on a postnasal pack which is temporarily placed in the nasopharynx to control adenoidal fossa oozing.

POST-OPERATIVE CARE

This is divided into two periods:

1. Immediate post-operative care is given in the recovery room where a suction apparatus, instruments, drugs, etc., for dealing with emergencies are available for use during the reaction period, and where specially trained nurses are on duty. Before he awakens the patient is given an injection of long-acting penicillin and a dose of chlorpromazine —younger children by suppository, adolescents and adults by intramuscular injection. The patients usually sleep intermittently for several hours, readily awakening for fluids and nursing and toilet care. We prefer repeating the chlorpromazine rather than ordering a narcotic or hypnotic.

2. Each patient is given printed instructions to guide him after leaving the hospital the next morning. Prior to leaving the hospital a soft meal is served him. A prescription for pain relief is given the older children and adults (usually a salicylate with codein), the use of chewing gum is encoucaged; aspiring chewing gum and gargles are forbidden. The throats are examined on the seventh day, the patient returns to school or work on the eighth day.

POST-OPERATIVE DANGERS

Post-operative hemorrhage is primary (first 24 hours after surgery), or secondary (fifth and seventh days post-operatively). In the majority of instances, primary bleeding is due to inadequate hemostasis at the time of operation, to the loss of a ligature from the throat during the reaction period or soon thereafter, or to some constitutional disorder which interferes with the clotting of blood. The first two causes are almost always due to faulty surgical technique; the third may be obviated by a proper preoperative history and laboratory examination.

In primary bleeding place a postnasal pack in the nasopharynx (in the case of adenoidal bleeding), or take one or more sutures in the bleeding tonsil fossa.

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Late hemorrhage is almost always due to too-early loosening of the coagulum, with exposure of bleeding granulations. The crust which soon covers the entire surface of the wounds is continually under strain by the normal movement of the regional muscles. Since granulation tissue begins to form almost immediately after the operation, too early lifting or loss of the crust will expose such granulations, and hemorrhage may result. The usual healing time is from 7 to 10 days.

FACTORS IN LATE HEMORRHAGE

Factors in causing late hemorrhage include onset of acute febrile diseases, dietary deficiencies, hypertension, local infection, local trauma, blood dyscrasias and certain drugs. Printed instructions provided for patients cover these points. The use of antibiotics lessens the chances of serious infection of the wounds, and lozenges or other local medicaments assist in this endeavor, all help prevent secondary hemorrhage. The strict avoidance of the use of aspirin locally (as chewing gum or gargle) has been the largest single factor in reducing late tonsillar bleeding.

In several thousand cases those using aspirin chewing gum showed an incidence of bleeding of 9.9%, whereas in those not employing it, the incidence was only 1.3%. All patients in the series were encouraged to use non-medicated gum freely, so that the mechanical act of chewing was ruled out as the responsible factor for the bleeding.

Long-acting penicillin given parenterally immediately after surgery controlled post-operative infection to a large extent and the bleeding tendency was further minimized. In this series, the incidence of late bleeding was reduced to 0.95% of the cases [6, 7, 8, 9, 10].

USE OF A NEW MEDICATED GUM

In the past year and a half a new medicated gum containing neomycin sulfate, gramicidin and tropesin has been used in these cases.* Long-acting penicillin was given parenterally immediately post-operatively and the patient supplied these chewing gum tablets, one to be chewed before each meal, at bedtime and on arising, and whenever dryness of the throat or pain occurred.

No case of late bleeding has been encountered in 150 cases in which the gum was so employed. The average use was 6 tablets daily for 5 days, and 4 daily for 2 additional days. No local reactions were noted in any case. The gum was universally acceptable taste-wise. It was given to the older children and adults. It was not given to children too young to have acquired the gum chewing habit. The patients were instructed not to swallow the gum as only the local action of its ingredients was desired. The fossae in almost every case appeared cleaner than usual when inspected on the 7th day, and the incidence of bleeding was nil.

RELATIONSHIP OF TONSILLECTOMY AND ADENOIDECTOMY TO POLIOMYELITIS

A great deal has been published about the relationship of tonsillectomy and adenoidectomy to poliomyelitis, and much of what has been written has been contradictory, so that it is difficult to draw definite conclusions.

There is general agreement on some points:

1. If poliomyelitis should occur within one month after tonsillec-

*Orabiotic®, White Laboratories, Kenilworth, N. J.

tomy, the more severe bulbar and bulbospinal forms would be more likely to follow.

2. Routine tonsil and adenoid operations should not be done in the presence of epidemic poliomyelitis.

3. Whenever possible, all children upon whom tonsillectomy and adenoidectomy are contemplated should be inoculated with the Salk vaccine beforehand.

SUMMARY AND CONCLUSIONS

1. The important aspects of tonsillectomy and adenoidectomy are considered in the light of modern medical concepts.

2. The subject is reviewed from the standpoints of: indications for operation, pre-operative preparation, anesthesia, surgical technique, post-operative care, post-operative dangers, especially hemorrhage and infection, and relationship of tonsillectomy and adenoidectomy to poliomyelitis.

3. The use of a chewing gum containing neomycin sulfate, gramicidin and propesin as an adjunct to the post-operative care of tonsillectomized patients is reported.

4. The relationship of tonsillectomy and adenoidectomy to poliomyelitis is reviewed. It is doubted that the performance of tonsillectomy and adenoidectomy increases the incidence of poliomyelitis, except for a short period after operation.

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40 u./day . . . reduce insulin 30% to 50% immediately; gradually reduce insulin dose if response to Orinase is observed.

more than 40 u./day . . . reduce insulin 20% immediately; carefully reduce insulin beyond this point if response to Orinase is observed. In these patients, hospitalization should be considered during the transition period.

Caution: During the initial "test" period (not more than 5 to 7 days), the patient should test his urine for sugar and ketone bodies three times daily and report to his physician daily. For the first month, he should report at least once weekly for physical examination, blood sugar determination, and white cell count (with differential count, if indicated). After the first month, the patient should be seen at least once a month, and the above studies carried out. It is especially important that the patient, because of the simplicity and ease of administration of Orinase, does not develop a careless attitude ("cheating" on his diet, for example) which may result in serious consequences and failure of treatment.

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ORIGINAL ARTICLE

Infectious Mononucleosis

Differential diagnosis, laboratory findings, treatment, and prognosis of infectious mononucleosis, with indications of some complicating factors

EMERSON YODER, M.D., *Denton, Kansas*

Infectious mononucleosis is an acute infectious systemic disease, probably viral in etiology, which may involve any organ of the body. It is most commonly seen in children from 2 to 12 years of age and in young adults to 30 years of age, but it may occur in any age group.

SIGNS AND SYMPTOMS

The manifestations of the disease are protean. They may be so mild as not to be brought to the attention of the physician or they may be severe. Symptoms include fever up to 103°, with or without sweats and chills, sore throat, lymphadenopathy with the most common involvement in the anterior and posterior cervical glands, and splenomegaly with tenderness in the splenic area. Headache is usually general and dull, cough ensues on enlargement of the mediastinal nodes. Skin rashes are sometimes seen, and in a small percentage of cases, hepatomegaly and jaundice are found. There may be involvement of the central nervous system, with symptoms of meningitis or encephalitis.

EPIDEMIOLOGY

The disease is thought to be spread by droplet infection through close contact. Epidemics are frequently seen in schools and in army camps. The incubation period is thought to be from four to ten days.

LABORATORY FINDINGS

White blood count early in the disease is normal or below normal. Later it may increase to from 10,000 to 70,000 with a decrease in the percentage of polymorphonuclear cells and an increase (by the end of 10 days) in the mononuclear series. As the disease subsides, there will be a decrease in the total white count and in the percentage of lymphocytes. Bone-marrow biopsy is useful in ruling out leukemia.

The most useful of the laboratory aids to diagnosis is a positive heterophile antibody (Paul-Bunnell) test. This should be positive in dilutions of 1:80 or more, but it may not become positive for from one to five weeks following the onset of the disease. While a positive test confirms the diagnosis, a negative test does not rule it out. The level of the titer in the Paul-Bunnell test is not an indication of the severity of the disease.

Biopsy examination of an involved lymph gland reveals hyperplasia of the lymphocytes. The normal structure of the gland is not destroyed, and there is no invasion of the capsule. Generally, a lymph gland biopsy is not necessary for diagnosis.

Spinal fluid will show a cell increase up to 600 per c.m. with a lymphocytic pleocytosis, and an increased protein. Spinal fluid pressure is usually not altered.

DIFFERENTIAL DIAGNOSIS

The list of diseases to be considered in the differential diagnosis is long. One should consider infectious mononucleosis in any case of fever of undetermined origin, sore throat, cervical lymphadenopathy or splenomegaly. The blood smear, showing large numbers of monocytes, and a positive Paul-Bunnell test may confirm the diagnosis.

The prognosis is good—the patient is usually well at the end of three or four weeks. The splenomegaly and lymphadenopathy may persist.

COMPLICATIONS

In a very few cases of infectious mononucleosis, splenic rupture has been reported. With a greatly enlarged spleen one should guard against even slight trauma, be cautious in palpation, and guarded in the prognosis. A few deaths have been reported. C.N.S. involvement and the occasional jaundice might be considered as complications.

TREATMENT

There is no specific therapy for infectious mononucleosis. Treatment is symptomatic and supportive. Bed rest should be insisted upon during the acute phase. Discomfort from sore throat and cervical gland enlargement may be relieved by soothing gargles, plus icepacks or ice collars. Fatigue and malaise will clear after the disease has run its course. The patient should be advised that this might take several months.

Diet may be selective unless hepatitis occurs, in which case the diet should be high in protein and carbohydrate. Individual complications, such as pneumonia or infections of other parts of the upper respiratory system, should be treated with the antibiotics. Antibiotics are not indicated for the uncomplicated case.

Unless the services of the hospital laboratory are needed for diagnostic assistance, it should not be necessary to hospitalize the uncomplicated case of infectious mononucleosis. Isolation is not necessary.

ORIGINAL ARTICLE

The Black Widow Spider Bite Syndrome

Treatment with antivenom is most efficacious; a high index of suspicion is necessary as patients often do not recall being bitten; differential diagnosis presents difficulties

LEON J. TAUBENHAUS, M.D., M.P.H., *Brookline, Massachusetts*

The black widow spider—called widow because she devours her feeble mate once her eggs are fertilized—is distributed throughout the world; the American species, *Latrodectus mactans,* is the only spider of clinical significance in this country. This spider is found in fields, privies, garages and other outbuildings, and even in well-kept residential areas. She always chooses a dark or semi-dark place to weave her coarse, ragged web.

She is recognized easily—coal black, with a red or orange marking on the abdomen, generally of an hour-glass shape. From her common residence under the seat of outdoor privies, most bites have been reported on the genitals. Most of my 35 patients in North Carolina were bitten on the extremities while gathering wood or corn. Others were bitten while putting on discarded articles of clothing.

THE TOXIN

This spider usually will not bite unless disturbed. It injects, through the hooks on its tentacles, a neurotoxin, said to be fifteen times as potent as an equal amount of dried rattlesnake venom. Fortunately, the amount of venom injected is small, and except in cases of multiple bites, or in young children or the aged, danger to life is slight. Mortality reports range from zero to 5%.

Among my 35 cases, there were no deaths.

SYMPTOMS

Initially, there is a transient stinging at the site of the bite, which may be shrugged off and forgotten by the patient. The physician must specifically ask the patient about the possibility of an insect bite. Even so, the patient may deny having been bitten. The site of the bite may show a macule the size of a matchhead, or a wheal the size of a quarter. Following the bite there is a latent asymptomatic period from fifteen minutes to four hours. Pain starts in the bones, muscles and joints of the affected extremity, and spreads rapidly to the back and trunk, than to the abdomen. The pain becomes progressively more severe; in the typical case, the abdominal pain dominates the picture. The abdomen develops a board-like rigidity, which is similar to that seen in cases of ruptured peptic ulcer. Patients have undergone surgery because of this mistaken diagnosis. The patient is apprehensive, seems to antipicate fear, or even desires death. Usually he is doubled up and thrashing about. Collapse and shock may be extreme. Priapism has been reported as a symptom. Extreme pain, extreme abdominal rigidity, and restlessness are the predominant symptoms.

DIFFERENTIAL DIAGNOSIS

A ruptured peptic ulcer and other acute abdominal emergencies are hardest to differentiate. A high index of suspicion is necessary, as often the patient will not recall the bite. The patient must be questioned specifically as to a bite, and the bite-mark searched for. In the case of one of my patients who denied being bitten, a bite-mark was found under the edge of a fingernail.

In all cases, a therapeutic test can differentiate a black widow spider bite from other acute abdominal emergencies. The intravenous injection of calcium gluconate or magnesium sulphate will give temporary relief only from the spider bite syndrome. This procedure should be used, also as a prelude to specific therapy.

TREATMENT

Many and varied drugs have been reported as being used successfully. In my experience, most of them are valueless. These reports are based mostly on the hospital treatment of a very few cases. Usually the drug was used as a last resort, and suddenly the patient recovered. In 18 cases, in which I did not use specific therapy, symptoms lasted from 12 to 211 hours. Thus, it is easy to understand why any drug given late may have received undeserved credit.

Among the highly recommended drugs I have tried and discarded as worthless are neostigmine and atropine, curare preparations, adrenalin, anti-histamines, and narcotics. ACTH and cortisone may give relief, but often only mask symptoms temporarily. In one case, ACTH and cortisone masked completely the symptoms for four days, only to be followed by an acute exacerbation of symptoms after these drugs were withdrawn.

PALLIATION

Complete palliation may be obtained by the intravenous injection of 10 cc. of 10% calcium gluconate or 2 cc. of 50%, or 10 cc. of 25% magnesium sulphate. Occasionally

this relief is permanent, usually it lasts only for 5 to 30 minutes. These drugs may be injected alternately, or one of them may be injected repeatedly as needed. As the syndrome will last for many hours, it will be necessary to hospitalize the patient if only these drugs are used. This places an economic burden of hospitalization upon the patient which can be avoided by the use of specific therapy.

SPECIFIC TREATMENT

Specific therapy consists of the use of black widow spider antivenin —a dried horse-serum preparation, with a five-year expiration date. With its use, office therapy is entirely satisfactory and hospitalization is unnecessary. Its value has been confirmed by most doctors who have had extensive experience with this condition, both in the United States and in South America.

The only possible objection to its use is the danger of a serum-sensitivity reaction, immediate or delayed. Testing for serum sensitivity and desensitizing a sensitive patient may prevent anaphylaxis. Serum sickness can be treated adequately with antihistamines, cortisone, or ACTH. I have used antivenin in 17 cases, and feel it is superior, in all respects, to the non-specific therapy tried in 18 cases of this series. In 5 cases, mild serum sickness did develop, and it was controlled adequately with antihistamines. I feel that withholding antivenin in these cases is no more justified than withholding tetanus antitoxin in a case of a dirty, deep wound. Usually one vial of antivenin is sufficient. A few of my cases required a second ampule. None required a third dose.

On diagnosis, one ampule of calcium gluconate or magnesium sulphate is given intravenously. A drop of horse serum is placed in the patient's eye to test for serum sensitivity. While waiting to read this test, the vial of antivenin is dissolved in 5 cc. distilled water. If the eye test shows that the patient is not serum sensitive, the entire 5 cc. dose is injected into a buttock. If the patient is serum sensitive, the antivenin is given in desensitizing doses every 10 or 15 minutes until the total dose is given. Intravenous injections of calcium gluconate or magnesium sulphate are repeated as needed until the antivenin has been administered. The patient is then released, but he is advised to remain available for the next two hours. If symptoms recur, a second ampule of antivenin is given. In this case, if the patient is not serum sensitive, the second vial of antivenin is given intravenously.

Alopecia Totalis After Colcemide Therapy of Acute Gout

Fourteen mg. of desacetyl-methyl-colchicine (Colcemide) was administered orally within a 24-hour period for treatment of acute gout, with the subsequent loss of all scalp hair. Previous cases of alopecia associated with this therapy have been reported in patients with leukemic disorders, most of whom received larger total doses over longer periods. Further experience must be obtained with this drug before it can be considered a satisfactory substitute for colchicine.

Mikkelsen, W. M., et al., *New England J. Med.*, 255:769-770, 1956.

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Q. How does Marsilid act?

A. Marsilid (iproniazid) is an amine oxidase inhibitor which has a normal eudaemonic* rather than an abnormal euphoric effect; it promotes a feeling of well-being and increased vitality; it restores depleted energy and stimulates appetite and weight gain in chronic debilitating disorders.

Q. How soon is the effect of Marsilid apparent?

A. Marsilid is a slow-acting drug. In mild depression it usually takes effect within a week or two; in severe psychotics, results may be apparent only after a month or more.

Q. What are the indications for Marsilid?

A. Mild depression in ambulatory, non-psychotic patients; psychoses associated with severe depression or regression; stimulation of appetite and weight gain in debilitated patients; chronic debilitating disorders; stimulation of wound healing in draining sinuses (both tuberculous and non-tuberculous); adjunctive therapy in rheumatoid arthritis when associated with depressed psychomotor activity (Marsilid stimulates physical and mental activity, appetite and weight gain wthout objective joint changes).

*Eudaemonia is a feeling of well-being or happiness; in Aristotle's use, felicity resulting from life of activity in accordance with reason.

ORIGINAL ARTICLE

The Management of Psychiatric Symptoms Associated With Aging

A new combination of drugs for the treatment of a distressing, chronic disease condition is reported on favorably

RICHARD C. PROCTOR, M.D.,* *Winston-Salem, North Carolina*

One-third of all persons first admitted to public mental hospitals in this country are more than 65 years of age. One of the increasingly prevalent problems facing the physician today is the patient with cerebral arteriosclerosis. It is difficult to persuade patients or their families to place these patients in hospitals or nursing homes, and, on the other hand, many nursing homes are not prepared to take care of them. Some of the patients with only mild symptoms, such as loss of recent memory, confabulation, restlessness and agitation, may be depressed by barbiturates — both physically and psychically. These drugs may increase confusion and there is danger of over-medication. The newer tranquilizing drugs have proved beneficial in some instances, but they may also produce over-sedation or cause precipitous drops in blood pressure.

*Assistant Professor, Department of Psychiatry and Neurology, Bowman Gray School of Medicine of Wake Forest College, Winston-Salem, North Carolina.

DRUGS OF ESTABLISHED VALUE

The effect of nicotinic acid and pentylenetetrazol in the therapy of the psychiatric symptoms of cerebral arteriosclerosis has been reported by many observers including the auth-

or.[1,2,3] Pentylenetetrazol, a synthetic organic tetrazol derivative, has long been employed as an effective respiratory and circulatory stimulant.[4] Its action is mainly on the respiratory, vasomotor and vagal centers of the medulla, but all parts of the cerebrospinal axis are stimulated. Consequently, it improves pulmonary ventilation and circulation, and helps overcome cerebral anoxia.

Nicotinic acid is a potent peripheral vasodilator, but whether or not this effect is transmitted to the central nervous system is not clear. Whatever its mode of action, it seems to produce beneficial effects in elderly patients.[5,6,7,8]

ORIGINAL FORMULA

The original pentylenetetrazol and nicotinic acid formula contained 200 mg. of the former and 100 mg. of the latter per dose, combined either in a lactate of pepsin base containing 5% alcohol, or in capsule form.* The dosage was 3 to 4 capsules or drachms per day, depending on individual response. The results obtained were gratifying, particularly in patients who exhibited little or no agitation.

MODIFIED FORMULA

Since many patients with cerebral arteriosclerosis show considerable agitation, restlessness and insomnia, it was decided to add a minimal amount of one of the ataractic drugs to the formula. Reserpine was selected because of its additional antihypertensive qualities. Reserpine 0.25 mg. or 0.5 mg., was added to each single dose, and the medication put up in a tablet form.†

The preparation has now been tried in 20 cases, and results have been so encouraging as to warrant this preliminary report in the hope that other investigators will try it therapeutically in suitable cases. The following case reports are presented to illustrate the type of patients in whom the formula seems to be most effective.

CASE 1. A 64 year old married white man was admitted to hospital with a history of progressive mental deterioration for the previous 7 to 8 months. He had had diabetes for many years, which was fairly well controlled. He was confused, disoriented as to time and place, and was unable to recognize meaningful people around him. He became agitated and disturbed, particularly at night, and was difficult to manage. One month previously a complete medical and neurological evaluation was done in a general hospital. Electro-encephalogram revealed an abnormal area in the posterior aspect of the skull. E.C.G. revealed an old myocardial infarction. Blood pressure was 140/86. There were signs of peripheral arteriosclerosis, and funduscopic examination showed a similar finding in the eye grounds. The patient was totally disinterested in his environment and personal attire. He responded to questions in an irrational manner. His talk was rambling, and his affect was flat and retarded. He was unkempt, and his memory was poor particularly in the recent field. He was restless and agitated to such an extent that he

*Nicozol,® Drug Specialties, Inc., Winston-Salem.

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†Nicozol® with Reserpine, Drug Specialties, Inc., Winston-Salem, N. C.

was a nursing problem. He was started on Nicozol capsules, each containing 0.5 mg. reserpine, three times a day and at bedtime. Over the next few weeks he became able to recognize people and objects, and became oriented. He became much less of a problem. His agitation subsided, he slept much better, and was able to return home. He has maintained his improvement over a six month period. There have been no signs of toxicity.

CASE 2. A 67 year old married white man, seen in office because of ideas of reference, mental confusion, agitation and disorientation for some five months. He complained of dizziness and poor memory. His family stated that he rambled in his conversation and kept repeating the same things over and over. With loss of interest in his usual pursuits, he worried over minute details and had trouble sleeping. He would become agitated and ramble away from the house. He had to be attended constantly. Blood pressure was 190/100; aortic second sound much louder than the first, and there was a Grade II aortic systolic murmur, evidence of peripheral arteriosclerosis, and the fundi showed a similar picture. Mental examination showed him to be mildly confused and disoriented. There was agitation and restlessness, and mild ideas of reference. He was unkempt, and his recent memory impaired. His remote memory was fairly intact. He was placed on Nicozol capsules, each 0.25 mg. of reserpine, three times a day and at bedtime. Gradually his appetite improved, his affect became more appropriate, he began to take interest in his surroundings and in his personal appearance, his memory improved and his dizziness lessened. He became much less of a management problem and slept better at night. He has been followed for a period of eight months, and no signs of toxicity has developed.

DISCUSSION AND RESULTS

The use of oral pentylenetetrazol and nicotinic acid in aged patients with favorable results has been previously reported. There is much in current literature to support the use of reserpine in the management of symptoms of agitation and restlessness. A combination of Nicozol and reserpine should offer a new possibility for the management of aged patients both in and out of hospitals. There is question concerning the development of convulsions with the use of pentylenetetrazol. This preparation will produce convulsions if administered intravenously, but to produce convulsions when administered orally, it must be given in massive doses. In two previous communications by this author, no convulsions were reported or noted.

The results of treatment of 20 patients has been encouraging. Of the 20, 16 have shown improvement. There has been a reduction in agitation and restlessness in most of the patients, so that they can be managed at home with a minimum of nursing care. Eight of the 20 have had electro shock therapy (EST) during the early course of the Nicozol-reserpine therapy with no untoward effects. The average number of EST was six, and the treatment was modified by the use of anectine, surital and atropine. The EST was given to relieve symptoms of severe depression.

All patients have been followed for a minimum period of six months, some for 12 to 15 months, and to date

the 16 have maintained their improvement.

It is suggested that this combination of nicotinic acid, pentenetetrazol, and reserpine be considered by others for the management of aged patients with evidence of cerebral arteriosclerosis and agitation. This is presented only as a preliminary report, further studies are indicated before a final evaluation can be made.

Estrogen in the Control of Epistaxis and Hemorrhage After Adenoidectomy

A man, 26 years of age, was brought to the emergency room with spontaneous epistaxis of three days duration, which had resisted all attempts at control at other hospitals and clinics. He was admitted and received a transfusion of 1,000 cc. of blood. The nose was packed anteriorly and posteriorly. Vitamin K, vitamin C, Koagamin (aqueous solution of oxalic and malonic acids), penicillin and ice pack instituted.

The profuse bleeding stopped but oozing continued. On the second and third days of hospitalization, it was necessary to change the anterior packing. On the fourth day, there was evidence of ulceration of soft palate and the packs were taken out. There was no bleeding for two hours, then he bled profusely from nose and mouth. He was then given 20 mg. conjugated estrogens equine intravenously. Bleeding stopped in one hour. Three days later, slight oozing began and again 20 mg. of estrogen was administered intravenously. Bleeding stopped in 30 minutes. Within a few days the patient was discharged from the hospital. There has been no more bleeding. The etiology of the epistaxis has not been determined.

Since this initial case, five more patients have been controlled with intravenous estrogen, and in none was bleeding as prolonged. Each seemed very difficult to control with the usual therapy. Any case of epistaxis in which no bleeding point could be found, in which the bleeding is nasopharyngeal, or continuous for several hours, demands active therapy. The therapy was 20 mg. of estrogen,* intravenously. Four patients were treated in the office, one in the hospital because of exsanguination, and one hospitalized because of a history of hypertension with hemorrhage. All six cases have been closely followed; in no case has there been a recurrence of bleeding.

In ten cases of profuse hemorrhage following adenoidectomy, bleeding and coagulation times in all were within normal limits after estrogen was given in dosage of 5 or 10 mg., depending on the child's weight, given deep into the gluteal muscle. Each patient was checked every 10 to 15 minutes. One case was completely controlled in two hours, all others stopped bleeding within one hour.

The response in all cases was dramatic; in only three cases did bleeding continue for over an hour. It is hoped that future studies will demonstrate the value of this therapy for other types of spontaneous hemorrhages.

*Premarin, Ayerst Laboratories.

Menger, H. C., *J.A.M.A.*, 159:546-548, 1955.

ORIGINAL ARTICLE

Proper Use of Obstetrical Forceps

Each case must be considered individually to determine the correct use of the forceps, for their improper use may cause severe damage

WALKER DEMPSEY, M.D., *Red Bay, Alabama*

Obstetrical forceps, used properly, may save the lives of many babies and mothers. Improper use of forceps may cause severe fetal damage, fetal death, or severe material injury.

The first consideration is the proper time to apply the forceps. In general, forceps should be used when the cervix has been dilated fully and retracted for one to four hours, and the progress of the labor has ceased or slowed. Each case must be considered individually, depending upon the length of labor, position of the fetus, condition of the mother and estimated size of the baby, and on the facilities and help available.

The term mid-forceps designates use of forceps when the biparietal diameter of the fetal head lies between the ischial spines. Outlet or low-forceps designates the position when the biparietal diameter is below or past the ischial spines. Inlet or high-forceps designates the position when the biparietal diameter lies in the plane of the inlet but has not engaged completely. Only under very unusual circumstances, if at all, should high or inlet forceps be used.

Conditions to be fulfilled:

1. Forceps delivery should not be done in a woman with contracted or very small pelvis.

2. The cervix must be fully dilated and effaced.

3. The bladder must be empty.

4. The membranes must be ruptured.

5. The head must be engaged.

6. The mother must be anesthetized adequately.

If one attempts forceps delivery of a partially anesthetized squirming mother with tightened perineal muscles, damage to the mother and fetus is apt to result. The choice of anesthetic may be Trilene, low-spinal, chloroform, ether, or other agents and techniques.

In home deliveries, the best position for the mother is crosswise in the bed with an assistant holding each leg, buttocks resting on the edge of the bed. The physician should sit in a straight chair facing the patient's perineum.

TECHNIQUE

In the ideal forceps delivery, the fetal head lies in the anterior-posterior (A-P) diameter of the maternal pelvis with the occiput against the pubis, and the biparietal diameter of the fetal head well below the ischial spines. In this position, the forceps usually slip in easily with the pelvic curve of the forceps corresponding to the mother's pelvic curve.

As a rule, the left blade is grasped with the left hand and placed in the left side of the mother's pelvis; the fingers of the right hand guide the point of the left blade. Next, the right blade is grasped lightly with the right hand and placed in the right side of the mother's pelvis, the fingers of the left hand serving as a guide. If there is an ideal application, the forceps will now lock easily. If the forceps do not lock easily, the handles should be gently depressed. If locking does not then occur, the forceps may be twisted gently, then slightly pushed upward into the pelvis. If locking does not occur, the forceps should be removed for a re-evaluation of the position of the fetal head. Force should never be used in placing or locking the forceps, or in extracting the fetus.

After the forceps are locked on the fetal head, extraction is begun with gradual traction, holding the handles with both hands. If the uterus is having contractions, the pulls on the forceps are made with the contractions. If the uterus is not contracting, gradual pulls on the forceps are made intermittently simulating uterine contractions.

The line of traction must be in the axis of the pelvis. When the fetal head is in midplane of the pelvis, traction is somewhat downward; as the occiput passes the pubis, the traction is in an upward direction. As the perineum begins to bulge, it is best to do an adequate episiotomy, usually other than at midline. Unless one is extremely careful with the forceps delivery, a midline episiotomy can quickly extend into the rectum. The fetal head may be extracted completely with the forceps, or the forceps may be removed when the head is crowning upward beyond the pubis, the delivery completed by pressure on the head from behind the anus.

OCCIPUT-POSTERIOR (O-P) POSITION

Occasionally one sees a small fetus deliver spontaneously and with moderate ease in the O-P position. Frequently, forceps must be applied to effect delivery, which may be difficult when the occiput is posterior. One has the choice of delivering the

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O-P fetus with forceps, either by rotating the occiput anteriorly before traction, or by applying the forceps to fit the pelvic curve and delivering the head with the occiput remaining posterior. The logical way seems to be to deliver with the O-P, if that can be done with ease. Always a deep episiotomy must be done, because the fetal head is presenting a wider diameter. Traction is applied straight with the mother's body until the forehead reaches the pubis and then traction is gradually turned upward.

If delivery with O-P appears to require much force, an attempt to rotate the occiput anteriorly should be made. When rotating the fetal head, one must keep in mind a three-dimensional picture of the position of the forceps blades. If the handles of the forceps are made to describe an arc during rotation, the points of the blades will maintain a position in the center of the pelvis. It is best to apply *some* traction as rotation of the forceps is done. After the fetal head is rotated, the forceps are then upside down, the curve of the forceps opposite to the curve of the pelvis. The forceps are removed and reapplied as for the usual occiput-anterior (O-A) position, and the delivery completed. Occasionally on removal of the forceps after rotation, the head will tend to return to its O-P position. To prevent this, moderate pressure on the fetus from the abdomen is made by an assistant, or one may hold the head with one hand inserted in the vagina after the first blade is removed and until the left blade is re-applied to fit the pelvic curve.

TRANSVERSE ARREST POSITION

Usually it is not feasible to apply forceps to the fetal head in the optimal position, i.e., a blade over each malar region. In the right occiput-transverse (O-T) position, the posterior fontanelle is felt on the right side of the mother's pelvis, the sagittal suture transversely to the anterior fontanelle, which lies in the left side of the mother's pelvis. The fetal occiput is at the right side of the mother's pelvis, the fetal left malar region against the mother's bladder. The left handle is grasped with the left hand and inserted into the left side of the pelvis. With the right fingers as a guide, the blade is rotated over the left malar region as the handle is lowered gradually. The right handle is then grasped and the blade inserted in the right side of the mother's pelvis so that it applies to the right parietal bone behind the right ear of the fetus. One usually finds some difficulty in locking the forceps, but with the rotation and pressure on the handles, approximation of the handles for adequate traction may be obtained. One may keep a finger between the handles to prevent too much pressure on the fetal head.

The traction on the transversely arrested head is combined with rotation of the forceps so as to rotate the occiput anteriorly, after which the forceps can be reapplied so as to better fit the bilateral malar regions of the fetal head.

FACE PRESENTATION

Face presentation occurs when the forces of labor cause the fetal neck to extend instead of flex. If the face is presenting with the fetal chin beneath the maternal pubis, the forceps may be applied to fit the maternal pelvic curve with the blades grasping the parietal bosses. Trac-

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1. *Clin. Med. 2:1009, 1955.*
2. *Amer. Pract. & Digest Treat. 7:1447, 1956.*
3. *Clin. Med. 3:1059, 1956.*
4. *Unpublished data.*

available: multiple-dose vials containing 8 ml.—one average treatment course.

MULFORD COLLOID LABORATORIES, Philadelphia 4, Pennsylvania

*T.M. Reg. U.S. Pat. Off.

tion is applied downward, until the chin passes beneath the symphysis, and then upward as the occiput is delivered over the perineum. A deep episiotomy is essential.

When the face is presenting, with the chin pointing toward the hollow of the sacrum, best results are obtained by inducing in the mother deep anesthesia, manually pushing the fetal head into the pelvis and flexing the baby's neck anteriorly, changing the position to O-A. Forceps are then applied, and the fetus extracted as in the usual O-A position. One should never attempt rotation by the forceps in a case of face presentation when the chin is arrested deep in the hollow of the sacrum. If at all possible, flex the fetal head before attempting such an extraction.

BROW PRESENTATION

A brow presentation is handled in the same manner as a face presentation. If the brow is presenting beneath the pubis, and the chin is anteriorly towards the bladder, the head may be extracted by applying forceps to fit the pelvic curve, pulling downward until the brow passes beneath the pubis, and then over the perineum.

If the brow is presenting with the chin directed toward the hollow of the sacrum, the mother should be anesthetized, the fetus pushed manually back up into the pelvis, and the neck flexed to convert the brow presentation to an O-A presentation. Forceps may then be applied and the fetus extracted as in the usual O-A presentation.

Fatal Vaccinia Associated With Cortisone Therapy

The danger of dissemination of bacterial infection by cortisone therapy is well known, and it can usually be managed by appropriate antibiotic therapy. The possibility of virus dissemination under similar circumstances has received less notice. There are no completely satisfactory virucidal agents for managing such a complication.

Hill recently reported three deaths among children who contracted varicella while receiving cortisone for other reasons. Autopsies in these children revealed varicella lesions in all organs. Kozinn et al. emphasized the danger of vaccinating children who suffered from agammaglobulinemia, because they could not mobilize antibodies to this virus.

One patient had chronic lymphocytic leukemia, was on cortisone therapy, and had a low gamma globulin level. In addition, she was exposed to vaccinia virus. The latter ultimately resulted in her death. The most important factor in the patient's inability to mobilize antibodies to vaccinia was the suppressive effect of cortisone therapy, since her leukemia was under good control, and administration of gamma globulin failed to alter the course of the vaccinia infection. Cultures from the various lesions revealed vaccinia virus. It would seem unwise to introduce live virus into patients with leukemia when they are receiving cortisone therapy, as danger of dissemination of the virus exists.

Olansky, S., et al., *J.A.M.A.*, 162:887-888, 1956.

ORIGINAL ARTICLE

Surgery of Ingrowing Nails: A Simplified Office Procedure

A simple surgical procedure and a specially designed instrument for removal of ingrowing nails is described

MARVIN D. STEINBERG,* Pod.D., *New York City*

Recurrent ingrowing nail is a common and disabling condition which usually requires surgical correction. The condition may be seen from infancy. The peak of incidence seems to occur in adolescent males. No age group or sex is completely excluded. Involvement of the large toe is most frequent, with a smaller incidence in the lesser toes.

CAUSES OF INGROWING NAILS

Ingrowing nails may be initiated by trauma, improper cutting, chronic epidermophytosis and other skin infections, or improper footgear. Multiple acanthoma may complicate this condition and is characterized by multiple bulbous skin enlargements periungually. More than one toe is usually involved.

The recurrent signs are swelling, severe pain and suppuration. Hypertrophic flaps, congenital malformations, abnormal lateral pressure from footgear, or orthopedic disturbances may prevent the successful extrusion of the infected particles of nail, causing a foreign body tissue reaction with infection.

The classical surgical procedures are time-consuming, difficult and leave much to be desired in the way

*Affiliated with Jewish Memorial Hospital, New York.

of after-pain and post-operative results. The regrowth of spicules of nail are frequent and the cosmetic results are poor.

This surgical procedure makes the operation a simple office procedure. There is little trauma and the technique after preparation takes no more than 30 seconds. The patient remains ambulatory and has little or no discomfort. This technique and instrument was developed and perfected over a period of 10 years and has been used with uniformly excellent results in over 800 cases.

All infected ingrowing nails should be x-rayed to rule out subungual exostoses, bone infections or other bone diseases. Both dorsoplantar and lateral x-rays should be taken and similar plates should be made of the uninvolved opposite toe for comparison.

Podiatrists control many cases of ingrowing nails by packing the nail grooves with cotton after carefully smoothing the edge of the nail with a circular curette. Surgical correction is indicated when there is constant recurrence and extensive granulation tissue and hypertrophic fibrotic flaps. Marked deformity of the nail and matrix also make surgical correction mandatory.

CONTRAINDICATIONS FOR SURGERY

Patients with uncontrolled diabetes, occlusive vascular disease and severe Raynaud's disease should not have radical foot surgery. What seems to be an ingrowing nail with infection and focal necrosis at the point of perforation of the nail may be an early manifestation of thromboangiitis obliterans. The toes may appear cyanotic and there may be a dependent rubor or history of claudication. Surgery under these circumstances may be tragic.

CONTROL OF INFECTIONS

Infection should be controlled as thoroughly as is possible prior to surgery. Only the mildest of wet dressings should be used locally, e.g., chlorazene, 1 tablet per 6 oz warm water used continuously as long as desired. Tineal infections are best controlled by the use of the undecylenic acid compounds. If doubt exists as to the nature of the infection it is best not to use antibiotics until a culture is made. Any offending nail easily approached should be removed as soon as possible as this acts as a foreign body and continues the active infection. Forty-eight to 72 hours is usually sufficient time in preparation for surgery.

THE STEINBERG TREPHINE

The successful development of this operation required a special instrument.* (Fig. 1) The instrument comprises a sharp, hollow, circular trephine-like knife which bores out a cylindrical core of tissue including a part of the nail. A raised portion of the sharp cutting edge protrudes and serves to separate the core of excised tissue, which is contained in the hollow bore of the instrument.

This technique evolves from a basically different concept in which the removal of the offending portion of the matrix starts anteriorly, arriving underneath the corresponding portion of the matrix auto-

*The author gratefully acknowledges the assistance given in the development and production of the new instrument by Central Research Specialties of Tuckahoe, New York.

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1. Best, C. H., and Taylor, N. B.: *The Physiological Basis of Medical Practice*, 6th ed., 1955, p. 544.

*Although dioctyl sodium sulfosuccinate is an effective stool softening agent, enemas or laxatives must be used in many patients for complete therapy in chronic constipation according to:

2. Antos, R. J.: Southwestern Med. 37:236 (April) 1956.
3. Friedman, M.: Am. Pract. & Dig. Treat. 7:1588 (Oct.) 1956.
4. Cass, L. J., and Frederik, W. S.: Am. J. Gastroenterol. 26:691 (Dec.) 1956.

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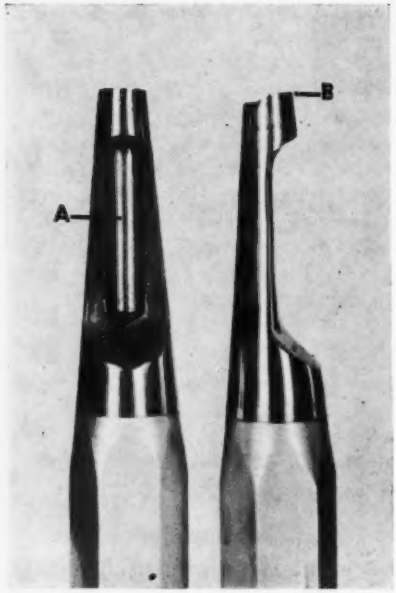

FIGURE 1

The Steinberg Trephine. Note tissue groove "A" and raised cutting edge "B" for severing the core of excised tissue.

matically. There is no need for curettage or other intervention.

The instrument starts from a nick made in the anterior nail edge and proceeds along the nail posteriorly to the proper part of the matrix. Any roughness of the underlying phalanx and all fibrotic pathological tissues are removed within a few seconds by the sharp bore of the instrument.

PREPARATION FOR OPERATION

Local anesthesia is used, by means of a 25 gauge, ½-inch needle attached to a 1 cc. tuberculin syringe.

When anesthesia is completed, all loose infected tissues as well as any irritating nail easily approached is removed. The entire area is then washed with alcohol, dried and painted with tincture of Merthiolate and then dried with a sterile gauze pad.

TECHNIQUE OF OPERATION

The anterior edge of the nail is nicked with a nail splitter or a sharp scissors, ⅛ inch from the affected lateral edge. An incision is made from the posterior corner of the nail and should extend to the tubercle at the base of the phalanx, being angulated slightly toward the involved edge of the toe, and be bluntly undermined to allow the cutting head of the instrument to enter.

The trephine is now engaged at the nick in the nail with the tissue groove upward. The instrument is turned on its long axis, left to right and right to left, with a boring motion, directed posteriorly, keeping the instrument parallel and close to the phalanx. This boring action is continued until the head of the instrument disappears under the skin overlying the matrix. Nail bed, infected granulations and fibrous tissues are excised and contained in the tissue groove of the instrument. The boring is continued until only the base of the cutting collar is visible. The cutting edge now at the posterior extreme of the matrix, the instrument is retracted slightly and raised perpendicularly to the phalanx bringing the cutting head in contact with the matrix. It is then pressed down firmly causing the raised cutting edge to sever the attachments of the plug of excised tissue in the groove of the instrument.

Bleeding usually is slight and subsides after a minute or two of mod-

erate compression with a gauze pad. The wound is then thoroughly dusted with sterile sulphanilamide powder.

The free edge of the nail should be so trimmed as to prevent it from irritating the healing wound. All redundant skin should be excised neatly. A slight separation of 1/8 inch between wound edges of the skin allows the deeper structures to heal before the skin closes. One large Michel clip placed snugly at the middle of the posterior incision diminishes oozing, approximates the wound edges and prevents the bandage from adhering to the wound. The surface of the wound is again dusted with sterile sulphanilamide powder and dressed with a dry sterile gauze bandage.

Dressings may be changed every 5th day using only sulphanilamide powder. Healing is usually complete in 3 to 4 weeks. The patient may walk the day following the operation and there is remarkably little afterpain. Cosmetic results are excellent and the nail edge is well separated from the healed tissues. Bathing is not permitted until healing is complete.

In the 150 consecutive operations performed by the author there was no instance of recurrence or spicule formation. In 3 cases where surgery was performed before control of the infection, healing was completed by the additional use of wet dressings and antibiotics.

SUMMARY

A surgical approach to the management of ingrowing nails is described. A specially designed instrument is utilized to simplify the operation. The operation may be completed within 30 seconds after infiltration anesthesia. Surgical trauma is at a minimum resulting in little post-operative pain and disability. Healing is usually rapid and the cosmetic results are excellent. The technique may be performed as an office procedure. Uniformly good results were obtained in over 800 cases.

Fatal Agranulocytosis During Promazine Therapy

A 57 year old woman was admitted to psychiatric service with a diagnosis of schizophrenic reaction, paranoid type. The onset of her mental illness was insidious over a period of years. On admission, the physical examination showed nothing essentially abnormal. Psychiatric observation revealed no significant changes over the years. She had hallucinosis, was seclusive, irritable, hostile and noisy, and did not take part in ward activities. Her speech was rambling, incoherent. Patient had not previously received any of the ataraxic drugs, and there was no history of any convulsive disorders. Prior to promazine therapy W.B.C. 8,200, hgb. 15.4 gm., hematocrit value 42%.

Death from agranulocytosis occurred on the 48th day of administration of promazine. The dosage began at 100 mg. per day and reached a maximum of 1 gm. per day in 4 divided doses over a 42 day period.

Solomon, J. D., *J.A.M.A.*, 162:1308-1309,1956.

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ORIGINAL ARTICLE

Essentials of Psychotherapy—A Case Report

The primary objective of this article is to provide an answer to the question of how does a psychiatrist handle a psychosomatic problem

MANUEL M. PEARSON, M.D.,* *Philadelphia, Pennsylvania*

The complaint is frequently voiced by the general practitioner that he does not understand what goes on in a psychiatrist's office—what happens to his patient after the referral. What are the forces that operate during the course of his patient's psychotherapy?

"Psychosomatic" as a term has some drawbacks, but it does point up the unity of body and mind. The hypothesis of the psycho-physiological mechanisms emphasizes the following points: repeated discharges of emotion travel over the autonomic nervous system to the blood vessels and smooth muscle. The result is vasospasm and ischemia with either reversible or irreversible tissue changes. A newer concept is to refer to the disorders nosologically as psychophysiological disorders.

To make this more meaningful, a case history is presented in detail just as the patient was carried along in psychotherapy. This woman, 29 years of age, was referred by a gynecologist, who stated that her chief complaint was pain in the clitoris, of four years duration, that had been present since the birth of her son. The pain persisted after circumcision, x-ray therapy and excision of the clitoris. Another gynecologist reviewed her entire medical history, examined her thoroughly, found

*Associate Prof. Psychiatry, Univ. of Pennsylvania, School of Medicine and Grad. School of Medicine.

nothing wrong physically, and suggested that she might have a psychosomatic problem, reinforcing this suggestion by stating that he would consider a wider excision if the psychiatrist did not help. The referring gynecologist said, "I can't make her out; she wants a radical excision," and he indicated that he was willing to do this if nothing was achieved by psychotherapy.

I saw the patient for the first time in January, 1954. She was a tall, attractive, well-groomed, flushed, not very well educated woman, who talked in a very cooperative but very anxious fashion. She said, "To me it is not pain: it is like an open cut. I don't know if it feels so tender. It seems to go right through my insides. I can feel it right to the top of my head."

She had undergone an appendectomy in 1948; delivery in August, 1949; tonsillectomy in January, 1952; circumcision of the clitoris in September, 1952; removal of a breast cyst in January, 1953; excision of the clitoris in May, 1953; and the removal of a toenail in January, 1954.

FATHER FIXATION

She described her intense anxiety about coming to see "the nerve doctor" and said, "I could hardly wait, couldn't sleep all night. I have always been terribly afraid of doctors." I asked why. The patient blurted out without any apparent connection, "The main reason is I am scared to death of my father." There then followed a long tirade about a domineering, frustrating, jealous, possessive father, with obvious features of pathological dependency in the relationship. For example, "I am more married to him than to Fred (husband). Even if I were 10,000 miles away from him, he would still have me."

Her language indicated some latent sexual overtones. She emphasized that she had never shared this information before, even with her gynecologist. Upon direct questioning, the patient denied any connection between her feelings about her father and her pain.

At the second visit, she told about her sexual difficulties in her marriage, dyspareunia and then abstinence for a period of seven months. There was more about her pain, with the confusing description: "Any time I get excited, my head hurts. It goes right to my head." There were further details about her father, with much outpouring of rage, anger and tears. During the interview, she revealed herself to be immature, emotionally labile, naive, and inclined toward magical and phantasy thinking.

At the third interview, three weeks later, the patient started by stating, "The soreness has left me. I don't know what happened—whatever I had about my father just broke through." She expressed surprise at having revealed so much about her father, and at being no longer afraid of him. She went on to tell about feeling generally much better, of working at a satisfactory job, and of being less easily upset by her father. She ascribed it to being out of the house and working. She remarked that she was having orgasm in her sexual relations. She elaborated further regarding her father and said, "He is a funny person, you have to read his mind, he hurt me so much. He's always on

top, and we're underneath." It was obvious this patient tied in together the feelings of fear and pain.

Her referring gynecologist later reported, "The patient has not had a single pain since her last visit."

Her fourth and last visit was in June, 1954, ten weeks from the time of the previous visit. She evidently had made a symptomatic recovery. "I don't know where the pain went to, you don't know what it is to have that away." She went on to describe her general progress in life, with a new job, with realistic plans for her house, and living away from her father. She attributed her progress to my asking the question, "How is your home life?" She said, "You learned me not to be afraid." There was further evidence of how much the patient equated the feelings of fear and pain. She requested a termination of the visits, which was approved with the understanding that she could return if at all necessary.

SUMMARY

This patient presented herself with gynecologic pain. The pain appeared to be psychological, as evidenced by the vagueness of the description, as well as the quality and inconsistency of the pain. It occurred in the setting of an immature personality confronted with a disturbed, important and key relationship. She was a victim of polysurgery and, therefore, one could deduce the presence of guilt and the need for punishment. The referral process was interesting, since psychotherapy was suggested as a last resort measure. Apparently this referral resulted in the patient being ready for treatment. There was a good result after four visits. Obviously this report represents the telescoping of the process of treatment and symptomatic recovery.

The general principles of therapy are applicable to any psychosomatic problem. It is first necessary that one understand the dynamics of personality—understand that anxiety results from conflict; that conflict may arise where there is a disturbed key human relationship, as in this patient with a domineering and rejecting father. We could easily determine that this patient was subject to immature, magical thinking and equated the feelings of fear and pain.

The methods utilized in therapy consisted primarily of active listening as the interviewing technique, and the full utilization of the doctor-patient relationship, which, in the last analysis, means the awareness of the doctor's personality as a therapeutic agent. When the patient was given an opportunity to tell her story in her own way, with the therapist taking an attitude of interest and sympathetic understanding, it was fairly easy to discover many important facets of her past and present life which indicated the existence of stressful conflicts. This technique created an atmosphere of confidence and trust; at this point, it was imperative to avoid being too reassuring or too enthusiastic about the eventual outcome. Guiding the interview with short questions—listening attentively, called "active listening," and talking *with* the patient, not *at* her, were the keynotes, thus affording the patient an opportunity for the benefits that come from abreaction or catharsis.

Psychotherapy is predicated upon the knowledge of the patient's personality, an appreciation of the sig-

nificant biographical events and the key human beings of his lifetime. Reassurance, encouragement and desensitization from misconceptions can then be utilized. In our patient, pointing out the connection between her "painful" feelings and her bodily pain necessitated proper timing, dependent upon the establishment of the positive doctor-patient relationship. Only then could the therapist expect relief from anxiety resulting from his interpretations or suggestions. Our patient needed relief from the overwhelming burden of hostility toward her sick and domineering father. As a result of her becoming aware of this "painful" relationship, she diverted her energies toward outside work and toward a more adequate fulfillment of the roles of mother and wife.

In conclusion, I should like to present Doctor Karl Menninger's statement regarding his concept of comprehensive medicine:

"What shall we call the 'disease' . . . (in) a middle-aged puritan spinster who appears in my office with a chancre on her lip? Isn't that a simple diagnosis? I don't think so. Nor would you if I told you the circumstances of how she acquired that chancre, whom she acquired it from, how she happened to select that type of man, or why she had permitted him to kiss her. Her sickness cannot be accurately diagnosed as just primary syphilis. She did not come to me because of it . . . she was so depressed about the implications of the infection that she now wanted to kill herself. What is the name of that disease? . . . What is the diagnosis in a patient who has coronary symptoms because he takes his wife to a party? What is the diagnosis in a woman who has migraine on week-ends that her son is home from college?"

The Use of Quinidine

To keep this often paradoxical drug from falling into disrepute, its use should be limited to clinicians who are aware of its hazards and its limitations

PAUL H. PFEIFFER, M.D., *Waterville, Maine*

The first indication that cinchona might be useful as a cardiac medication was the successful treatment of "rebellious palpitation" with "the bark" in 1749 by a French physician, Jean-Batiste de Senac. The modern usage of quinidine for disorders of heart rhythm resulted from the observations of a businessman patient of Wenbeback who, in 1914, found that *quinine* changed his auricular fibrillation to regular rhythm. Four years later Frey, experimenting with the other cinchona alkaloids, found *quinidine* to be effective in disorders of cardiac rhythm.

Quinidine, the dextro-rotary isomer of quinine, can be found to concentrations of up to 3% in cinchona bark. It is prepared by isomerization of quinine.

Quinidine has been used successfully in the prevention and termination of auricular fibrillation, auricular flutter, auricular extrasystoles, and paroxysmal supra-ventricular extrasystoles. It must be used discriminately in these disorders. The two major contraindications to its use are former reaction to its use, and complete auriculo-ventricular heart block. Aside from these specific instances the contraindications are not clear-cut.

There is evidence to suggest that quinidine supresses the oxygen uptake of cardiac muscle, that it interferes with normal processes requir-

ing acetylcholine, and that it is capable of lowering the plasma potassium to low levels.

ROUTES

Quinidine is available for oral, intramuscular and intravenous use. The intravenous route is indicated only in extreme emergencies, and the drug must be injected very slowly. Maximum blood levels are obtained in 1 to 3 hours after oral administration, and 50% of the peak level remains after 8 hours. Whenever doses of 0.6 gm. or more are being used, frequent blood pressure and ECG checks are obligatory. Clinical response correlates so poorly with blood level obtained that this determination is of little help in practice. A dose of 0.2 gm. to 0.4 gm., every 6 to 8 hours, is sufficient to prevent the occurrence of a few symptom-producing extrasystoles. On the other hand, ventricular tachycardia and pulmonary edema might require 0.8 gm. to 1.0 gm., every 3 to 4 hours. Enteric-coated capsules are often used to slow absorption of the bedtime dose.

ILL EFFECTS

The toxic effects range from the well-known symptoms of cinchonism to rarely-encountered thrombocytopenic purpura, delirium, respiratory depression and optic neuritis. Among the serious cardio-vascular manifestations are heart block, cardiac standstill, ventricular tachycardia and ventricular fibrillation.

LIFE SAVING

Quinidine, in ventricular tachycardia or prefibrillatory ventricular extrasystoles, may be life-saving. Since the advent of pronestyl there has been a tendency to prefer it to quinidine in the treatment of these disorders since it seems to be less toxic and is more easily administered intravenously. Quinidine is of value in the prophylaxis of paroxysmal auricular tachycardia. Occasionally digitalis proves equally effective.

Recently there has been a revival of interest in the use of quinidine to convert auricular fibrillation to normal sinus rhythm. Unless there are definite contraindications, the patient with a history of repeated emboli deserves a try at conversion after suitable anticoagulant therapy. A discouraging feature of this form of therapy is that relapses occur in 50-70% of the cases after a few months. A relapse rate of only 20% has been obtained by the use of large maintenance doses. Patients with large hearts and intractable failure, who could most benefit from conversion, are the ones most difficult to convert and most likely to develop serious toxic reactions to quinidine.

Use of this drug should be limited to clinicians who are aware of its limitations, alert to its hazards, and willing to take the precautions necessary to obviate serious toxic effects.

J. Maine M. A., 47:48-49,1956.

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Management of Injuries to the Eye in General Practice

The general practitioner should be familiar with the nature and treatment of these ocular injuries; immediate medical attention is often mandatory

FRANK W. NEWELL, M.D., *Chicago, Illinois*

Many eye injuries are simple to diagnose and treat shortly after they have occurred, but if neglected, or if time is lost in seeking specialized attention, may be converted to a serious problem conceivably with loss of the eye. The patient is done a disservice who, following an injury, is not given the benefit of available treatment but is sent off to the nearest ophthalmologist.

For treating an ocular injury, a local anesthetic is the most important drug to have available. Tetracaine hydrochloride in ½% concentration (Pontocaine) is preferred because it does not support bacterial growth. Two per cent sodium fluorescein which is useful in the diagnosis of corneal defects, is extremely likely to become contaminated, and unless it is sterile should not be used.

Vision should be measured in any injury involving the eye. If a testing chart is not available, a newspaper should be used and a notation made of the vision in each eye as tested separately. Many persons have never noticed prior to an injury that vision is poorer in one eye than the other and attribute the loss of vision to injury or treatment.

Regardless of the chemical, whether acid or alkaline, the most impor-

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tant treatment is immediate irrigation of the eye with copious amounts of tap water. If the patient is seen later, after most or all of the chemical has been washed out, the cul-de-sacs should be irrigated again, using normal saline. With the fluid flowing freely the lower lid should be drawn down and irrigated and then the superior cul-de-sac irrigated by elevating the upper lid.

With burns from lye, plaster, and similar caustics, the lid should be everted and all adherent particles picked out granule by granule. Because of the likelihood of severe damage even when the initial injury seems minor, these patients are best referred to an ophthalmologist following initial treatment.

Acid burns are usually much less serious than alkali, and the initial injury is the limit of damage.

Following the removal of the chemical, infection should be prevented by the instillation of an antibiotic 3 or 4 times daily until the eye is white—30% sulfacetamide or 4% Gantrisin solution, or one of the broad-spectrum antibiotics may be used. Because of the danger of local sensitivity, penicillin, streptomycin and sulfathiazole ophthalmic preparations should not be used.

FOREIGN BODIES

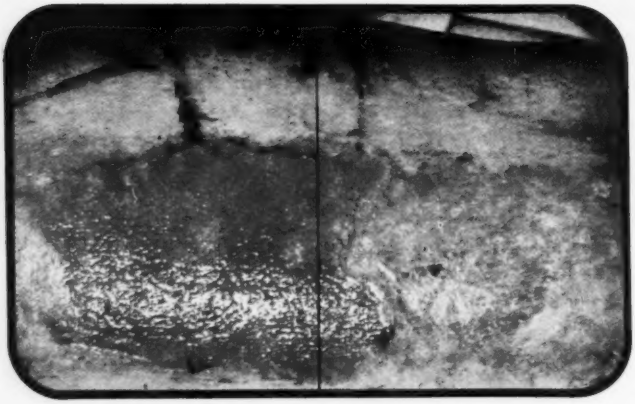
The vision should be measured and then ½% Pontocaine instilled, followed by 2% sodium fluorescein and the excess removed by several drops more of Pontocaine. Patient's locating the foreign body on the upper lid at the outer portion is of no value since superficial corneal irritation is referred to this area. If symptoms are not relieved by a local anesthetic, usually one may rule out a foreign body.

An applicator moistened with saline or a 5 cc. syringe filled with saline ready, the lid is everted, and the foreign body removed, if found. If not found on the upper lid, the cornea should be inspected in good illumination. Fluorescein will rim any foreign body with a greenish coloration. A body may be frequently washed out by a stream of saline from a 5 cc. syringe. *Even when applied with unusual gentleness an applicator removes large areas of corneal epithelium.* If the foreign body is so loosely adherent that it could be wiped off with an applicator, it could also be irrigated off with much less damage.

The failure of irrigation to remove a foreign body suggests that it was hot when it struck. It may be removed by a sterile 25-gauge hypodermic needle using a syringe for a handle, keeping the needle parallel to the eye so that the needle can not impale the eye. If the top comes off leaving a ring of rust, this ring should be gently removed in minute fragments. Sometimes it is easier to remove the ring 24 hours later, but this should be reserved for cases in which the foreign body has been deeply imbedded. An adherent foreign body will almost invariably cause a corneal scar so the dissection should be limited to that area essential to removal.

AFTER CARE

If irrigation is all that is required, the instillation of a sulfonamide or antibiotic may be all that is necessary. The patient is seen once within the week to make certain the eye is healed. If there is a deep corneal defect the eye will be more comfortable if tightly patched. After removal the discomfort may be the same as



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Jeffords, J. V., and Hagerty, R. F.: Ann. Surg. *145*:169, 1957

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before. Pain should be controlled with aspirin or with codeine, if necessary, never by local anesthetics which delay healing. If there is extensive injury to the eye, the pupil should be dilated with homatropine. The patch may be removed as soon as the cornea does not stain with fluorescein. As long as an epithelial defect persists, an antibiotic or sulfonamide should be instilled locally at regular intervals.

INTRAOCULAR FOREIGN BODIES AND LACERATIONS OF THE GLOBE

These demand highly specialized treatment. The diagnosis may usually be made by observing the deformity of the pupil caused by prolapse of the iris. Manipulations for diagnosis should be minimal as the injury may be severely aggravated by incautious examination. No local medications should be used, both eyes should be bandaged and the patient moved by ambulance for specialized treatment.

OCULAR CONTUSION

Blunt trauma may cause an injury from a simple black eye to almost complete destruction of the posterior pole of the globe. In most such injuries there is no treatment indicated. Even with slight hemorrhage into the anterior chamber, the most important therapy is absolute bed rest with both eyes bandaged, because in many cases hemorrhage occurs 48 hours later far more severely. No medication should be instilled, and the less the eye is inspected or dressed the better the end result. Those patients with blood filling the anterior chamber, so that the iris cannot be seen, should be seen early by an ophthalmologist since a secondary glaucoma frequently occurs.

LACERATIONS OF THE LID

The horizontal laceration is parallel to the direction of the fibers of obicularis muscle and there is no tendency to gaping, so that closure is easy. Vertical lacerations may involve the lateral 5/6 of the lid, or the inner 6th which avulse the canaliculi leading to the tear sac. In those involving the outer 5/6 the key to successful repair is the placement of the first suture through the gray line of the lid to unite the lid margin at the proper plane. The remainder of the lid can be closed in layers using catgut for the posterior surface and silk for the skin. A delay of 24 hours may be followed by such retraction of the wound edges that major plastic surgery is required for repair. If the lid margin of both the upper and the lower lid is involved, a figure-8 suture may be used in which each lid splints the other. Laceration of the inner 1/6 in which the canaliculus is torn is best repaired as early as possible by a specialist. Even with highly expert repair it may not be possible to unite the avulsed ends of the canaliculus and additional surgery is required to correct watering of the eye.

Current Med. Digest, 23:45-49,1956.

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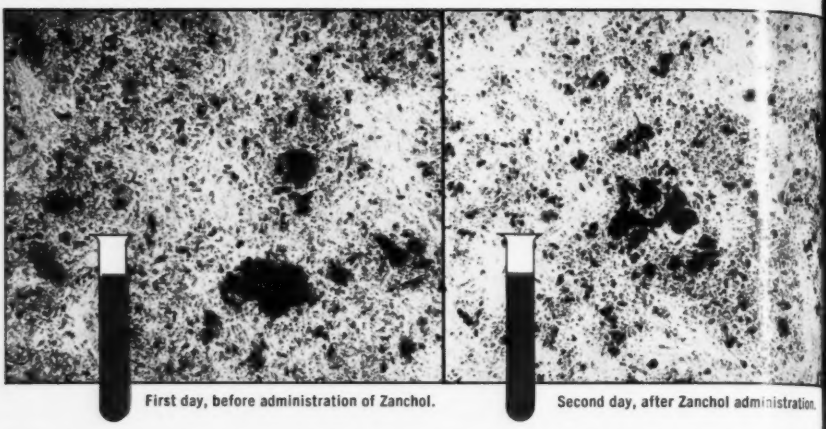
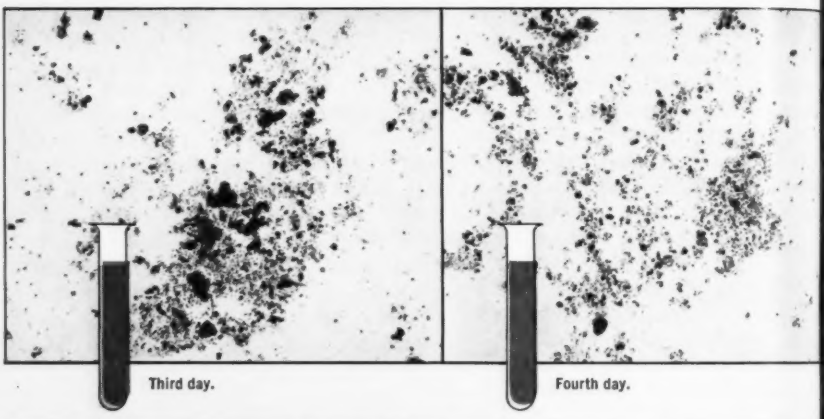


First day, before administration of Zanchol.

Second day, after Zanchol administration.



Third day.

Fourth day.

photomicrographs[1]

showing daily changes in sediment from centrifuged bile taken from T-tube drainage in a postcholecystectomized patient.

Fifth day.

Some Postoperative Complications

Unexpected complications may be difficult to detect or distinguish; measures are suggested to help prevent or control these hazards

JAMES A. KIRTLEY, JR., M.D., *Nashville, Tennessee*

In hemorrhage, after an operation, there should be no delay in correcting continuing bleeding. Bleeding following operation on the neck may require a tracheotomy to maintain an airway.

While the antibiotics have reduced the number of wound infections, they often mask their detection. Discontinue antibiotics when sharp rise in fever occurs after 72 hours, especially following removal of a gangrenous or perforated appendix.

Partial wound dehiscence may often be treated by approximating the skin edges with strips of adhesive tape. When loops of bowel are present in the wound, close with heavy interrupted sutures which pass through all layers of the wall. Few of these secondary closures heal with any later defect in the abdominal wall.

Atelectasis is the most common postoperative pulmonary complication and should be suspected when there is a sudden rise of temperature within 36 hours after operation. The diagnosis is easily made, and the patient should be encouraged to clear his bronchial tree by forced coughing. Bronchoscopy is indicated in patients having massive atelectasis.

Bronchopneumonia is rarely encountered and, like lobar pneumonia, usually yields to antibiotics.

Pulmonary embolism incidence

has not been decreased by early ambulation or prophylactic ligation of the superficial femoral veins. Since embolism is just as frequent in bed patients not operated upon, leg exercises and proper positioning in bed are important.

Acute dilation of the stomach is often manifested by a shock-like state characterized by sweating, tachycardia, pallor, dyspnea, hypotension and abdominal fullness. It is dramatically relieved by a Levin tube.

The distinction between "paralytic ileus" and early mechanical intestinal obstruction may be difficult, yet it is most important. Frequent adequate periods of auscultation of the abdomen are helpful, as are roentgenograms. The use of a Kantor or Miller-Abbott tube is indicated in the former condition, but may dangerously mask vascular changes in mechanical obstruction. Trauma to the abdomen or back may be followed by mesenteric thrombosis which can be corrected by operation.

Intraperitoneal infection still occurs, and demands repeated rectal and abdominal examinations and roentgenograms of the diaphragm.

Fecal impaction is not always in the rectum. One patient had a subtotal gastrectomy after a week of bleeding, with morphine regularly for several days. Two weeks after operation pain in the right side of the abdomen developed, and the patient was seen at home. A tender, palpable fullness disappeared in a few hours. Despite enemata and laxatives, abdominal cramping with alternate diarrhea and constipation continued. Barium enema showed a constant defect just proximal to the splenic flexure. The nature of this lesion was not known until the patient painfully passed a large ball of inspissated feces that probably had formed in the cecum.

Urinary complications are usually easily detected and controlled. Renal shut-down requires careful regulation of fluids.

Adrenal failure may be an unsuspected complication, and since there are no adequate preoperative tests the condition may not be suspected until severe hypotension exists.

In the use of intravenous vasoconstrictors, the solution should not be too concentrated; a second infusion can be started if indicated.

The trend is to treat phlebothrombosis or thrombophlebitis with bed rest, elevation of the extremities, plus anticoagulants in the former case. Not all of these require anticoagulants. The use of trypsin seems to hasten subsidence. Rest with elevation of the feet and heart are most important.

For the patient with one or more pulmonary emboli, there are certain valid indications for ligation of the inferior vena cava. Probably 85% of patients with venous thrombosis are best treated with rest and anticoagulants.

Thorazine seems to be more effective than most measures against hiccough. One patient "cured" himself in 2 days with frequent sips of champagne. The wife of a farmer from the hills stopped her husband's hiccoughs when everything short of bilateral phrenicotomy had failed. She cut an Irish potato in half and carefully placed one half over his umbilicus!

J. Tennessee M. A., 49:74-76,1956.

Episodic Stupor in Liver Disease

Evidence is cited that indicates that ammonia intoxication is an important factor in the pathogenesis of this syndrome

NASEEB B. BAROODY, M.D., *Florence, South Carolina*, and
O. RHETT TALBERT, M.D., *Charleston, South Carolina*

Progressively deepening coma with stertorous breathing, bleeding diathesis, and widespread muscular twitching or convulsions is frequently the terminal event in fatal hepatic insufficiency. However, the onset of stupor or coma does not necessarily imply a fatal outcome, and the term, "episodic stupor" has been used to designate this reversible clinical state.

Episodic stupor usually begins with the insidious onset of lethargy and mental confusion which progresses to stupor and often profound coma. At this stage there is sometimes a mild degree of rigidity of the limbs, and isolated, scattered jerking or twitching movements—a characteristic "flapping" tremor is often demonstrable. As stupor deepens into coma, some patients will suffer convulsions which may be either focal or generalized. This clinical picture is most often seen in patients with chronic, long standing hepatic disease. Less frequently the mental disturbance will take the form of an agitated confusion or delirium, rapidly progressing to coma and convulsions. The underlying liver disease in these cases is more likely to be acute yellow atrophy or acute toxic hepatitis. The "flapping" tremor is one of the most characteristic features of impending hepatic

coma, and may be valuable in making an early diagnosis of impending disaster.

ILLUSTRATIVE PATIENT

A patient suffering from chronic liver disease recently underwent 2 episodes of stupor and impending coma during hospitalization, illustrating the phenomena. The episodes were conditioned by therapeutic measures employed in the management of cirrhosis. The first episode was thought to be brought about by excess ingestion of protein, but since the patient had been on the high protein for almost 3 weeks when the stupor developed, a search for other possible factors revealed that Diamox had been started 5 days prior to onset. The second episode of stupor was precipitated by a diet of 260 gm. of protein daily in a deliberate attempt to determine if the neurological picture of hepatic stupor could be reproduced by increasing the dietary protein. The fact that on this diet there did develop an almost identical picture with that originally observed was evidence that high protein intake alone was sufficient as a precipitating factor. Following these 2 episodes, the patient tolerated a diet containing 80 gm. of protein daily for 2 weeks without further manifestation of stupor or coma.

Although other disorders which occur in the course of liver disease may lead to mental and neurological impairment, none of them with the exception of gastrointestinal hemorrhage is likely to bring about the combination of progressive stupor and the characteristic tremor which tends to spontaneous remission and recurrence.

One factor in episodic stupor in liver disease is a derangement in ammonia metabolism. Patients with severe liver disease have an elevation of blood ammonia, and one of the principle sources of ammonia in the body is from the breakdown of proteins in the intestinal tract. Normally, the ammonia is converted into urea by the liver. If ammonia is an important factor in the precipitation of this state in patients with liver disease, it is logical to investigate the protein content of the diet as a possible source. The phenomenon of meat intoxication appears to be closely related to this episodic and reversible type of hepatic coma.

CIRRHOSIS

A patient with carcinoma of the pancreas in whom an Eck fistula had been produced surgically manifested episodic stupor closely resembling the clinical picture of hepatic coma. The same phenomenon has appeared in cirrhotic patients in whom portacaval shunt was done surgically as treatment for portal hypertension. In long-standing cirrhosis, progressive communication between the portal and systemic venous channels develops, resulting in virtually the same circulatory situation as that existing in a surgically-produced Eck fistula. In the cirrhotic patient there could develop a clinical phenomenon comparable with "meat intoxication" as a result of excess protein entering the intestinal tract. In addition, the damage to liver parenchyma deprives the body of its mechanism for detoxifying blood ammonia and it accumulates in the blood and tissues. When the ammonia becomes fixed in the cerebral tissue in sufficient concentration to

interfere with certain of its metabolic activities, the manifestations of altered cerebral function develop.

The syndrome of episodic stupor in cirrhotic patients has developed following oral administration of ammonium chloride and carbonic anhydrase inhibitor, both of which are used as diuretic agents, and both of which cause an increase in blood ammonia in the presence of cirrhosis.

In patients with severe degrees of cirrhosis, a diet high in protein and certain diuretic agents are potentially hazardous and should be prescribed with caution. The characteristic tremor, asterixis, should be looked for, and may provide the warning that enables the physician to avoid the more advanced neurological disturbances by making the necessary alterations in therapeutic regimen before they develop. Stupor or coma in the patient with hepatic insufficiency may be reversible.

J. South Carolina M. A., 53:86-90,1957.

Tea

There is 75% the amount of caffeine in green tea as in black tea; the tannin content of tea is four times that of coffee. The lower amounts of caffeine and tannin per cup obtained with teabags are the result of smaller amounts of tea used in each bag, as compared with the amounts recommended for use on the label of bulk teas. There is twice as much xanthine (theobromine) present in a cup of cocoa as there is xanthine (caffeine) in coffee or tea.

From the scientific inquiry of Halpenny and MacDermot in 1939: "Good tea, brewed for five minutes, produces mild and pleasant stimulation, in no sense corresponding with the violent, unpleasant action of its main components, caffeine and tannin, when these are given separately or in combination.

"Strong tea, brewed ten minutes, may produce some mild discomfort, but the addition of milk nullifies this.

"Cheap tea, weak, may suit some palates but has no objective effects; in strong infusion is apt to be unpleasant.

"The effects of tea on gastric acidity and peptic activity are slight and variable. Tea does not increase acidity.

"Tea does not seem to alter the basal metabolic rate."

Lawton found in 1955 that tea "as a representative of the xanthine beverages is as good an agent for the relief of fatigue as has yet been offered. The capacity for muscles to perform work is increased by the cup of tea and this is a factor in explaining the relief of physical fatigue."

After an excellent and exhaustive study, the conclusions of Wirts et al. in 1954 were as follows: "Tea appears to increase the rate of gastric emptying when compared to the effect of an equal amount of water, when used with a 40% protein, carbohydrate, fat or combined (eggnog) meal. The iced beverages used have a more pronounced effect in this regard than the hot beverages. Tea appears to stimulate gastric motility. Tea in average amounts is not contraindicated in the treatment of most gastrointestinal conditions."

Frohman, I. P., *Med. Ann. Dist. of Col.*, 25:320-324, 1956.

CONCLUSIONS:

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1. Spiesman, M. G. and Malow, L.: Amer. J. Proctology, June 1956.

The Management of Hyperthyroidism

When and how to use the several effective therapeutic measures—iodine, antithyroid drugs, radioactive iodine and surgical procedures

LAURENCE H. KYLE, M.D., *Washington, D. C.*

The aim of therapy is to establish an euthyroid state, and then to maintain normal thyroid function.

After surgical removal of a large portion of the hyperfunctioning thyroid gland, the remaining portion is usually still hyperfunctioning, and in most cases the patient still has the basic hyperthyroid disease. Similarly, after treatment with radioiodine, a hyperfunctioning gland often remains. Antithyroid drugs, long-continued, may bring about an apparent remission of the disease.

The case readily controlled with iodine—one of mild to moderate thyrotoxicosis with a small gland—is the ideal one for prolonged medical management. If complete control can be effected with antithyroid drugs, and the patient is permitted to pursue his normal activities during this period of preparation, there need be no hurry to perform thyroidectomy. The main place of iodine is immediately preoperatively to decrease vascularity of the thyroid gland and thus facilitate the operative procedure.

Of the effective antithyroid drugs, propylthiouracil and Tapazol have proved most satisfactory.

Toxic reactions are infrequent. Usually the dose is no less than 300 mg. a day in the mild case, and as high as 700 or even 800 mg. a day in a severe case. After partial control, dose is gradually decreased, or,

if immediate surgical or radioiodine therapy is planned, the original dose continued until well controlled. Antithyroid drugs should be given every 6 or 8 hours. In some circumstances, iodine is given concurrently with the antithyroid drug. The antithyroid drug is started a few days, or at least a few hours, before the iodine.

Evaluation of the effects of treatment is difficult. BMR determinations are helpful, particularly if control values have been obtained. Many well-controlled patients show a BMR well in the minus range. Uptake of radioiodine, although excellent for diagnosis, is unsatisfactory for evaluation of effectiveness of antithyroid medication.

Hypothyroidism is readily managed by temporary discontinuation of therapy, or by decrease in dose. The problem of granulocytopenia appears so rarely and so precipitously that it would be most unusual to detect the warning changes, even with very frequent white counts.

The most frequent toxic reactions are fever and skin rash.

PROLONGED CONTROL OF HYPERTHYROIDISM

After the hyperthyroidism has been controlled, 3 courses of action then become feasible:

1. Iodine may be added to the regimen, and 10 to 14 days later subtotal thyroidectomy may be performed.

2. The antithyroid drug can be stopped, and 2 to 3 days later a therapeutic dose of radioiodine given.

3. The antithyroid drug may be continued for at least 12 months, following which the drug may be gradually withdrawn with the hope that a permanent remission may have been induced.

The rate of hyperthyroidism well controlled for at least a year is 50% and is lower for severe cases.

RADIOIODINE

Although radioiodine has been classified for use *after* the hyperthyroidism has been controlled, this agent may also be used as the sole form of therapy. This approach is hazardous in the severely thyrotoxic patient or in one with thyrocardiac disease. Sharp exacerbation of symptoms may follow its administration in the patient with moderate hyperthyroidism who has been previously untreated. The advisability of giving radioiodine without prior preparation must be questioned.

For the patient with mild disease and a small gland, particularly when cooperation is excellent, the treatment of choice is long-continued medical management, withdrawing the antithyroid drug slowly after the patient is euthyroid for 12 months or longer.

In severe disease with a large gland, especially if cooperation is poor, control is accomplished with antithyroid drugs followed by thyroidectomy.

In patients over 40 years of age, radioactive iodine is the method of choice. In those who have recurrent hyperthyroidism after surgery, radioactive iodine deserves strong consideration, irrespective of the age. With complicating disease either radioiodine or long-term management with antithyroid drugs is satisfactory.

Most patients believed to have toxic adenomas turn out to have dif-

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Reduces irritability, agitation, fear, hallucinations, disorientation, confusion, combativeness	—without inducing depression, drowsiness, stupefaction or gastrointestinal disturbances, as do tranquilizers

No untoward side-effects—save for "niacin flush" in sensitive individuals

ELIXIR		TABLETS	
Each teaspoonful (4 cc) contains:		Each tablet contains:	
Pentylenetetrazol	200 mg.	Pentylenetetrazol	100 mg.
Niacin	100 mg.	Niacin	50 mg.
Peptenzyme® Elixir	q. s.	Pepsin 1:10,000	5 mg.
SUPPLIED: Bottles of 8 fl. oz.		SUPPLIED: Bottles of 100	

DOSE: ½ to 1 teaspoonful (1 to 2 tablets), 1 - 3 times daily

R&C **REED & CARNRICK**, Jersey City 6, N. J.

REFERENCES: 1. Smigel, J. O.: M. Times 85: 149, 1957. 2. Levy, S.: J.A.M.A. 153: 1260, 1953. 3, Thompson, L. J., and Procter, R. C.: North Carolina M.J. 15: 596, 1954.

*Trademark

fuse toxic goiters with hyperplasia and nodularity. In a true toxic adenoma, surgery is probably the best mode of treatment after control has been effected with an antithyroid drug. In most instances of pregnancy complicated by hyperthyroidism, antithyroid drugs are satisfactory if one is careful not to overtreat.

Probably the most frequent error is that of inadequate dosage. Another is that of operating prematurely. Still another is premature cessation of medical treatment when the patient feels well after 3 or 4 months of therapy and then wishes to stop his medication.

M. Ann. District of Columbia, 25:594-598,1956.

Methods of Increasing Muscle Strength

The main uses of exercise are to restore or improve muscle function so that the patient can carry out his ordinary tasks by maintaining the activity of the unaffected muscles, increasing that of those affected and, if necessary, the recruitment of other muscles to assist or take over the function of those affected. The object is to ensure, as far as possible, the recovery of function. These aims can be best achieved by exercises designed to produce maximum activity of the involved muscles rather than to concentrate on the development of muscle bulk or strength.

Whichever type of contraction is decided upon, most routines require the patient to repeat submaximal isotonic contractions in rapid succession. Initially, in such a procedure, the muscular activity is below the maximum that can be voluntarily induced, but as the exercise is continued, more and more of the muscle is contracted in order to maintain the work output. Even when a maximum contraction is the primary aim it is probably not achieved, either because the patients does not know how to make a maximum effort, due to fear of causing pain or damage to an injured limb, or because of unwillingness to endure the discomfort that a maximum exertion may cause.

The "dosage" of the exercise prescribed should not be unpleasant or produce stiffness or soreness. The techniques for providing and measuring the effects of exercise are many. Apart from gravity and manual resistance there are many devices, usually incorporating springs and weights, to produce the load against which the muscles have to work. The optimum routine and apparatus will depend on what the muscles are expected to achieve, and how.

As to changes that may occur in the exercised muscles, we might attempt to measure muscle bulk and to determine the cause of any alterations, the degree of muscular activity and the blood supply of the muscles.

Under clinical conditions there will probably be no "normal baseline" measurements. We might compare measurements taken before and after the exercise of the same muscle group, or of the corresponding group on the opposite side of the body if we can assume this to be normal and unaffected by the exercise.

Darcus, H. D., *Proc. Royal Soc. Med. (London)* 49:12,999-1006,1956.

Regional Anesthesia

In certain cases, advantages for the patient, surgeon and anesthesiologist may be obtained from the proper administration of regional anesthesia

JOHN J. BONICA, M.D., *Tacoma, Washington*

Regional anesthesia produces less morbidity and mortality than general anesthesia. There has been a marked decrease in the use of regional anesthesia during the past 15 years, in which time the number of physician-anesthesiologists has increased tenfold.

Regional anesthesia blocks off afferent impulses which are often the cause of serious alterations in cardiac and respiratory functions and of initiating the stress syndrome.

Since the central nervous system is not involved, the respiratory, vasomotor and other centers are not depressed and thus important reflex mechanisms are not interfered with. Of deaths associated with 600,000 anesthesias and operations, those done with regional techniques (exclusive of spinal), gave a death rate of 1:6,100, with ether it was 1:1,100, with cyclopropane 1:2,300, and with Penothalmitrous oxide 1:1,800. The use of curare increased the mortality rate considerably, with Pentothal-nitrous oxide-curare 1:670, with cyclopropane-curare 1:240, and with ether-curare 1:62. When regional anesthesia was used the mortality rate was only 1/6 that with ether, and 1/100 that with ether-curare.

In another 10,000 spinal anesthesias, the mortality rate was much lower than that after general anesthesia. Combined statistics reveal

that among 61,400 patients receiving regional anesthesia there were 8 deaths which were considered to be due solely to the anesthetic, a rate of 1:7,675, while in a similar group of patients who received general anesthesia the deaths due solely to the anesthetic were 1:4,000. Of the 34 cases of cardiac arrest on the table in 8 years, during which time 110,000 anesthetics were administered in 6 hospitals, it was found that 9 of the patients had received regional anesthesia while 25 had received general anesthesia. During this period 46.5% of the patients had regional techniques, 53.5% general.

Regional anesthesia is of great value whenever it is necessary to operate on a patient with a full stomach, or one in pain and shock. In obstetrics it offers benefits to the mother, and does not produce fetal depression. An abrupt change from general anesthesia to regional block for cesarean section was followed by a decrease in infant mortality from 19% to 8%.

SPECIFIC ADVANTAGES

Regional anesthesia has advantages for outpatients, those who dread losing consciousness, and when unusual positions are to be employed—as in pilonidal cystectomy, hemorrhoidectomy, and excision of herniated lumbar disk. Whenever fluoroscopy or x-ray is a necessary adjunct to the surgical procedure, regional anesthesia eliminates the danger of explosion, respiratory depression, or obstruction in the darkened room, and the patient is able to cooperate. Postanesthetic nausea and vomiting are minimal. All of these factors favor early ambulation and oral feeding, and so there is decreased incidence of postoperative pulmonary, gastrointestinal and thromboembolic complications.

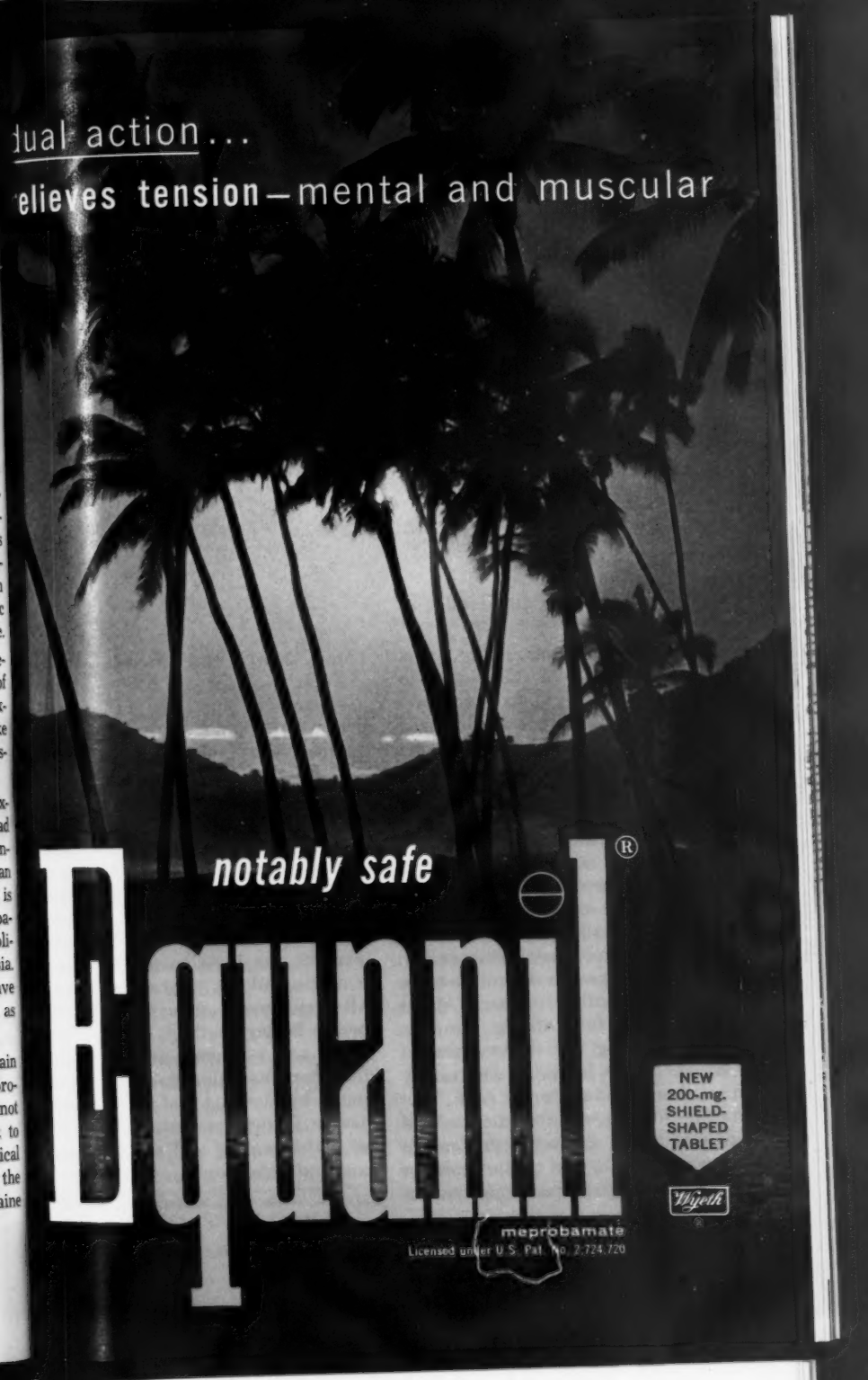
ANESTHETIC COMPLICATIONS

All needling techniques are inherently inaccurate because they entail penetration of the unbroken skin without a visual guide. This, coupled with the existence of anatomical variations, makes a precise injection difficult to master. It is much simpler to learn to introduce a needle into a vein and inject the "magic mixtures" than to locate a nerve blindly at varying depths. Every anesthesiologist has occasional discouraging results. The most frequent complication is alteration in blood pressure as a result of either extensive sympathetic paralysis as obtained in high spinal, peridural, and splanchnic block, or reaction to the technique.

Proper psychic preparation, preliminary medication, the use of sharp needles, and gentle and dextrous execution of the block, make the experience practically free of discomfort.

Intracranial, intrathoracic, and extensive operations about the head and neck are best done with a general anesthetic administered with an endotracheal tube. The method is not one for psychoneurotics or patients who have had serious complication following regional anesthesia. Regional anesthetic procedures have been used in patients as young as one year of age.

Nerve blocks for intractable pain have much more to offer than prolonged narcotic therapy. They do not tax the resources of the patient to the same extent as do neurosurgical operations, nor do they impose the same risk. The claim that procaine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is the safest and most satisfactory agent is not borne out in practice. Xylocaine, cyclaine, and chlorprocaine have the advantage over the standard drug of producing anesthesia much more rapidly. When these drugs are injected in the proximity of nerve trunks, anesthesia is produced in 5 to 8 minutes; with extradural blocks these agents have a latent period of 10 to 15 minutes. In over 8,000 dilute solutions (0.1-0.2%) Pontocaine proved much less toxic than procaine. Moreover, this drug produces anesthesia 2 to 3 times as long as that produced by the standard drugs.

The following techniques deserve special mention: brachial plexus block for surgery of the upper extremity; sciatic-femoral block for surgery of the legs; cervico-thoracic and lumbar sympathetic block for diagnosis and/or therapy of various disorders, and block of the trigeminal nerve or its branches for conditions about the face. In recent years segmental peridural block has been of great value for operative and obstetrical anesthesia, and for management of various non-surgical disorders in all parts of the body below the clavicle.

Wisconsin M. J., 55:387-395,1956.

Septic Tank Not to be Used on Lot of Less than One Acre

In the past ten years, the urban fringe has seen the installation of millions of septic tanks, far more than had been eliminated by sanitary engineering services in the previous 50 years. The septic tank has been installed for families who have neither the space nor the resources to prevent the development of a sanitary nuisance and a public health hazard. Often such families must go to the expense of a new installation or, if possible, thorough reconstruction. Septic tanks may work well in rural areas if people do not live too close to each other or use a great deal of water for bathing, laundry, air conditioning and dishwashing.

It was never intended for use by more than one family per acre. This may be too dense for septic tanks if soil conditions and water tables are not ideal. The use of septic tanks in congested neighborhoods is uneconomic, unwise and unwholesome.

Their widespread use in recent years may be due largely to the failure of local government officials to assure wise and orderly development of new neighborhoods, and to the failure of financial institutions to encourage builders to install community sewerage facilities. Since sewerage facilities are the only practical alternative to the use of septic tanks, the construction of these facilities must be encouraged if we are to avert the installation of millions of septic tanks in the next ten years. All government agencies need to organize better methods of managing urban and suburban growth. Immediate benefits will result from agreements by insuring and lending agencies to finance community facilities for water supply and sewage collection and treatment.

Lee, D. B., *Public Health Reports*, 71:553-556, 1956.

The Use of the Systemic Hemostat Carbazochrome Salicylate

Adrenochrome, either natural or synthetic, is useful as a hemostatic factor for control of seepage bleeding

J. C. BACALA, M.D., *Manila, Phillipine Islands*

There are occasions in surgery and obstetrics wherein a steady seepage-bleeding from incisions cannot be explained in the light of clotting time and bleeding time. Certain operations are frequently accompanied by abundant oozing, often without any local or clampable bleeders. In the past, hemostasis for such oozing was obtained by hot towel application with pressure, Gelfoam or Oxycel application, or by the use of suture-ligature.

The chemical control of such slow, steady and seeping hemorrhage has lately claimed the attention of clinicians and surgeons.

An oxidation product of epinephrine, adrenochrome was reported in 1937. It was later found to be hemostatic without being sympathomimetic. Adrenochrome was not stable, but had to be solubilized with sodium salicylate before pharmacologically effective doses could be given. However the monoxime and monosemicarbazone of adrenochrome were found to be stable.

This drug has no known contraindications. The antihistamines are said to inhibit efficacy.

Capillary bleeding may be due either to faulty coagulation or to increased capillary permeability. In

Most patients treated with 'Compazine'. . . "showed prompt, marked improvement in their emotional outlook."

Vischer[1] reports that 37 of 38 patients treated with 'Compazine' for psychoneurotic symptoms had "marked" or "moderate" relief. "21 patients were totally free of such symptoms and obtained a better response than to any previous medication. Confusion and depression disappeared dramatically, and primary complaints became less important to them as they became far more relaxed, less nervous and less tense. Many were able to return to work or had renewed interest in their surroundings and hobbies."

1. Vischer, T.J.: Clinical Study of Proclorperazine, A New Tranquilizer for the Treatment of Non-Hospitalized Psychoneurotics, New England J. Med., January, 1957.

Smith, Kline & French Laboratories, Philadelphia

Compazine★

a true tranquilizing agent with minimal side effects

★Trademark for proclorperazine, S.K.F.

pregnancy, fibrinogen is increased and blood coagulability increases as term approaches. In pregnancy the serum proteins and the hematocrit reading are reduced, while the capillary permeability increases in direct proportion to filtration rate. Thus in pregnancy seepage bleeding occurs more because of capillary permeability and in spite of increased coagulability. It is here that carbazochrome salicylate becomes specific for the strengthening of the capillary resistance.

This is true primarily in hemorrhages by diapedesis, as found in purpuras, retinal hemorrhages, petechiae, posthedulin and postdicumerol medication, diabetic retinopathy and conditions of capillary fragility and permeability.

Many of the observations made involved bleeding incident to trauma of incision, retraction, dissection, tearing and stretching. The cells draw closer together and the ends of the capillaries constrict, causing a self-clamping mechanism. In accordance with this idea, the oozing from squeezed-out crevices, denuded, de-placentated endometria, prematurely separated placentas, weeping tonsil beds, excavated prostatic floors, seeping ulcer or cancer growths, oozing abdominal incisions is best remedied by adrenochrome, either from the body's own supply from the oxidation of epinephrine, or supplemented from the outside in the form of carbazochrome salicylate.

There is reason to believe that in the temporary inhibition, suppression or absence of adrenochrome in the blood, oral or parenteral supplementation by synthetic carbazochrome salicylate will be of advantage for the control of capillary bleeding.

Experience with the drug is cited from 317 surgical and 13 obstetric cases. There were 233 tonsillectomies; 207 of the patients were benefited by its use. Post-tonsillectomy bleeding was reduced from 19.8 to 7%. The drug was also found useful in gastrointestinal bleeding, cataract extraction, epistaxis, incisional seepage, transurethral prostatectomy, menometrorrhagias, cervical oozing, antepartum and postpartum bleeding, threatened abortion, and prevention of capillary hemorrhages during Hedulin or Dicumerol therapy.

Western J. Surg., 64:88-95,1956.

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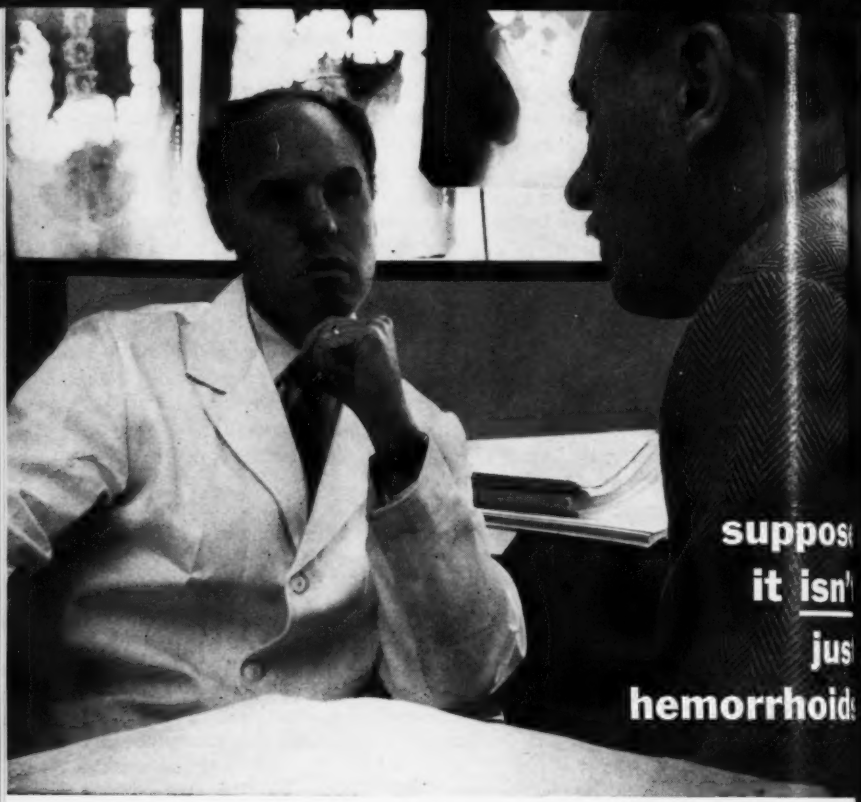

to avoid the "masking effect"

When the patient's fears or your own suspicions call for more extensive proctologic investigation, it becomes especially important to avoid the type of therapy which might mask serious pathology. In such cases, Anusol suppositories provide safe medication.

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WARNER-CHILCOTT

100 YEARS OF SERVICE TO THE MEDICAL PROFESSION

The Doctor Builds His Estate

Prepared for the readers of Clinical Medicine by the Research Department of the leading investment banking and brokerage firm of Bache & Co., 36 Wall Street, New York 5, New York

These monthly articles point out one method by which the professional man may overcome the particular handicap imposed upon him by our tax structure, which taxes the bulk of his income at normal income tax rates, as opposed to the capital gains tax avenue open to many businessmen. One solution to this problem is the systematic investment of a portion of current income each year in securities. Such a program, which should include many different types of investments such as bonds, preferred stock, common shares and shares of mutual funds, will have as its objectives growth of principal together with reasonable income. We again emphasize that even the most complete series of articles of this type cannot take the place of consultation with a representative of a reputable brokerage firm.

June is traditionally the month of weddings, orange blossoms and rice. To keep these articles as topical as possible, this month we are discussing "something old, something new, something borrowed and something blue."

At the inception of this series last year, we said that we would recommend a group of securities each month that might be similar in one of a number of respects—their industries, customers, capital structure, etc. Aside from fitting our jingle nicely, the securities we are reporting on this month have one thing in common—they are all suitable for the portfolio of a doctor building an estate.

For the "something old," we include Travelers Insurance Company.

The Finished Product—vs—The Raw Material

In Gallbladder Therapy

Each tablet contains:

PURE DEHYDROCHOLIC ACID
0.25 Gm. (3¾ gr.)

•

BELLADONNA
8 mg. (⅛ gr.)

•

PHENOBARBITAL
8 mg. (⅛ gr.)

For therapeutic superiority in gallbladder management, Nubilic assures beneficial hydrocholeresis, since Nubilic contains not a mixture of bile salts or acids, or cholic acid, but the full dosage of *pure dehydrocholic acid,* the ultimate product in bile processing. The therapeutic value of the other oxidized bile acids is not clearly known, but it *is* known that pure dehydrocholic acid definitely stimulates secretion of bile which is low in solids.

For comprehensive action, Nubilic contains *belladonna and phenobarbital,* to reduce biliary spasm, relax the sphincter of Oddi and thereby encourage free flow of bile into the duodenum.

Bottles of 25, 50 and 100 tablets.

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Travelers was chartered 94 years ago, and has been paying dividends since the Civil War.

For the "something new," the shares of San Jacinto Petroleum are suggested. Not only is the company new in age—having become publicly owned as recently as 1956—but it is a leading participant in the newest and hottest oil play of recent years, the Lake Maracaibo area of Venezuela.

For the "something borrowed," we recommend the 4% convertible debenture bonds of the General Telephone Corporation, one of the more attractive of the many convertible issues which have become so popular in recent years.

For the "something blue," we have to reach a bit further, and come up with one of the "blue chip" stocks, Union Carbide Corp., a company with an above-average growth record and promising future prospects.

All four of these issues would lend added diversification to a portfolio being assembled for estate building purposes. We might add, incidentally, that purchase of each of the securities mentioned in this space in past months, in addition to providing a reasonably liberal yield and affording good growth prospects, would also have provided a modest capital gain to date.

The importance of continued consultation with a reputable brokerage house, however, is pointed up again by a development which has occurred in one of the stocks we mentioned some months ago, American Bosch Arma.

That recommendation was predicated upon two factors—the improvement in the company's basic earning power as a result of the new management's changes in personnel and operating policies and the company's expanding interest in the defense program through the development of the fire control system of the B-52 and the inertial guidance system for guided missiles. The latter factor was highly significant for the long-term as it provided an important springboard to improved earnings.

The uncertainties of the defense program, however, highlighted the risks of this situation. We now understand that a change in the allocation of funds in the guided missile program may cause a change in American Bosch's program pertaining to guided missiles. While this uncertainty persists we would recommend that new commitments be deferred and that those unwilling to assume the speculative risks involved consider taking profits.

And now, something old, something new, something borrowed and something blue.

THE TRAVELERS INSURANCE COMPANY

The Travelers Insurance Company was charted under Connecticut laws June 17, 1863. The company began business April 1, 1864 with $200,000 capital. Over the years, the company has grown steadily and now it is one of the largest and most prominent of the "multiple-line" stock insurance companies in the country. It is licensed to do business in all states and in Canada.

The Travelers group as a unit writes virtually all forms of insurance protection. The parent company alone writes ordinary life and annuities, group life and annuities, and personal and group accident and health. All business written is on a non-participating basis. The Acci-

Travelers Insurance Co.			
Price	$83	Capitalization (12/31/56)	
Indicated Dividend	$1.10	Capital Stock	
Yield	1.3%	$5 par	10,010,000
1957 Price Range	Not Available		
Traded	Over the Counter		

dent Department of the Travelers Insurance Company owns all the stock of the Travelers Indemnity Company which began business in 1906 and writes a general line of casualty insurance. Travelers Fire Insurance, all of whose stock was formerly owned by Travelers Indemnity Company, was merged into the latter company effective at the close of business December 31, 1956. Travelers Fire wrote fire and allied lines. Charter Oak Insurance Company, all of whose business was reinsured by Travelers Fire, continues as a small subsidiary.

Growth over the last 11 years has been good, as indicated by the following table:

Life Insurance in Force (In Millions)			
	Ordinary	Group	Total
1956	$4,891	$13,826	$18,718
1955	4,682	12,320	17,002
1946	3,365	3,995	7,360
% Increase 1946-1956	45.4%	246.1%	154.3%

These figures show that while ordinary business increased only 45%, group business, which now represents 74% of the total life insurance in force, increased 246%. The future growth prospects in the life insurance department continue favorable. Sales of life insurance in the first two months of 1957 were 22% over a year ago, while sales of group life insurance, where the company concentrates its selling efforts, were u 35%.

Adjusted net gains from operatio in 1956, including the equity in th increase of life insurance in forc amounted to $33 million or $3.30 pe share. Results are most favorable i the life insurance department for number of reasons: (1) higher in terest rates on invested assets, (2 continued gains in mortality expe ience—progress made in the fields o medicine, surgery and public healt should make for continuation of thi upward trend, and (3) growth i the population of the country an the increased purchasing power i the hands of the middle and lower in come groups.

Earnings in the non-life insuranc business showed a decline last yea due to the highly unfavorable under writing experience in the fire and casualty lines. The combined loss and expense ratio increased to 96% as compared with 93.6% in 1955 and 89.9% in 1954. The average profit margin in 1946-1956 was 6.4% with only 1 year showing a loss and only 2 years showing a lower profit margin than 1956. Net operating earnings on non-life business amounted to $2.39 a share in 1956 as compared with $3.85 in 1955 and $5.33 in 1954.

Combined net earnings in 1956, including the equity in the increase in life insurance in force during the year amounted to $6.69 a share, down from the $6.92 in 1955 and $8.10

shown in 1954. During this period, the earnings in the life insurance department increased from $2.77 a share to $3.30 a share.

Based on the 10 million shares outstanding, net worth amounts to $70 per share. Dividends have been paid since 1864.

These shares appear attractive from an earnings standpoint, and we look forward to an improvement in the accident and casualty line. Moreover, the future growth prospects are good.

SAN JACINTO PETROLEUM

San Jacinto Petroleum as a publicly held company is so new that its annual report of March 1, 1957 was its first. Although the company was organized in 1950, the general public did not participate until the summer of 1956.

The current interest in this stock also involves something new. San Jacinto has various equities in the new concessions granted by the Venezuelan government in Lake Maracaibo, the big play in oil exploration this year. Although this area provides the bulk of the oil Venezuela now produces and has long been thought to have outstanding future possibilities, it is still relatively unexplored. It is unexplored because the Venezuelan government did not issue any concessions between 1945 and late 1956.

Since much of the potentially rich Lake area is unexplored, so that companies can select the most promising locations, the ratio of successful wells to attempted exploratory wells is very high. As one oil company executive recently remarked in justifying the high price his company had paid for Lake Maracaibo acreage, "There are very few dry holes in the Lake."

Lake Maracaibo provides the world's richest oil fields short of the Middle East. Reasonably good producing property in Maracaibo could yield better than 50,000 barrels per acre. Recoveries of about 200,000 barrels per acre are not considered too unusual.

These two factors, the high success ratio and the rich oil deposits, have caused a feverish scramble for new concessions. They have prompted oil companies to pay large bonuses for untested acreage: Few concessions have been procured for a bonus of less than $1,000 per acre and some have gone for more than twice this amount. Royalties from future production due the government begin at 16%.

In this most promising exploration venture, San Jacinto controls a 40% interest in a 2,000 acre block and an as yet undisclosed percentage of a 24,700 acre block. The 2,000 acre block is contiguous to acreage on which was drilled what now appears may be the largest single well in the Western Hemisphere. San Jacinto is to drill its well a mere 6,000 feet from this discovery. At present, after all costs are recovered, 50% of the profits must be shared with the original holders of the property. San Jacinto is presently attempting to purchase the 50% profit interest for 250,000 shares of its own stock.

Block 10, in which San Jacinto's interest is not yet disclosed, is between two new discoveries. It is, therefore, one of the most coveted blocks in the Lake.

There are presently about 1,900,000 shares of San Jacinto outstanding. (Within the past month the com-

San Jacinto Petroleum			
Price	$41	Capitalization (12/31/56)*	
Indicated Dividend	None	Long-term Debt	$1,892,857
Yield	None	Common stock	1,867,000
1957 Price Range	Not Available	*Adjusted to reflect conversion of Debentures	
Traded	Over the Counter		

pany called its convertible bonds increasing its capitalization from 1.5 to 1.9 million common shares.) On the basis of this capitalization, and assuming an 8% interest in Block 10, there are 0.2 acres per 100 shares of San Jacinto. Applying a theoretical possibility of 100,000 barrels per acre, each share of San Jacinto has a potential increase in value of 120 barrels or about $60.00.

Risks are present in this situation. The reality of its additional reserves of oil will not be known until the wells are drilled. In addition, the company's assets ex-Venezuela cannot be valued today at more than $25.00 per share. However, considering the particular location of San Jacinto's properties in Venezuela and the possible appreciation they promise, the risks appear well worth taking for the more speculative investor seeking capital gains.

A final word concerning San Jacinto's assets outside of Venezuela. Although these assets cannot be valued at more than $25.00 today, they do represent good long-term growth possibilities. This is true since the company's other properties are located in the most prolific offshore Gulf of Mexico area and to a smaller extent in the very interesting Paradox Basin of Southeastern Utah. The company also participates in a uranium venture and in the exploration of land in the coastal Louisiana area.

GENERAL TELEPHONE CORPORATION

4% Convertible Debenture Bonds dated May 1, 1956, due May 1, 1971. General Telephone Corporation is a holding company whose operating telephone subsidiaries comprise the largest independent (non-Bell) telephone system in the country. The company also controls Automatic Electric Co., the largest equipment manufacturers in the independent telephone industry in this country, with manufacturing subsidiaries in Belgium, Canada and Italy.

General Telephone also owns Leich Electric Co., which manufactures telephone equipment and has substantial interests in telephone operating companies in Canada, the Philippine Islands and the Dominican Republic. A considerable portion—about 39%—of consolidated system revenue is derived from manufacturing and equipment sales, so that the business is not subject to the limited return potential of a regulated utility. A substantial increase in production capacity of this phase of operation is underway.

The company's operating telephone subsidiaries generally serve smaller cities and towns and suburban and rural areas. From the standpoint of future growth, this places General in a favorable position to benefit from the expected continued trend of decentralization of population and industry. As of December 31, 1956, the

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ence on the value of ultrasonic therapy is growing in papers being presented by researchers and prac- physicians. These reports cover the treatment of itions ranging from arthritis and bursitis to sinusitis Herpes zoster. A large collection of medical journal rts on ultrasonics, including valuable treatment and history data, is yours for the asking.

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General Telephone Corp. 4% Convertible Debenture Bonds			
Price	103½	Present Value in Terms of Common Stock	88.53
Yield To Maturity	3.7%	Estimated Straight Bond Value	95
Current Yield	3.9%	Premium over Straight Bond Value	9.0%
Conversion Ratio—20.41 shares per $1,000 Debenture to 4/30/61, then higher		Where Traded	N.Y.S.E.
Present Price of Common Stock	43⅜		
Minimum Common Price Required for Profitable Conversion	50.71		

company had 2,775,000 telephones in 30 states in the U. S., 24,000 phones in Canada and the Dominican Republic and 53,000 phones in the Philippines.

Due to the numerous changes that have taken place in the structure of the system, it is difficult to develop a meaningful ratio of past earnings to fixed charges. In the year 1956, overall charges were earned 5.72 times, a satisfactory ratio, and we would expect adequate earning protection for debt in the future.

Earnings for the common stock have shown a strong upward trend, and amounted to $3.14 per share for the 12 months ended February 28, 1957. We expect continued earnings improvement this year, with a widening margin of protection for the present $1.80 dividend on the common stock. In our opinion, the convertible debentures are reasonably priced and attractive for longer-term growth. *Explanation of Terms*: If these debentures are not converted but are held to their maturity in 1971, the bondholder will receive par or 100 for his debenture making his net "yield to maturity" 3.7%. This yield reflects the 3½ percentage point premium over par at which the bond now sells, amortizing the premium over the life of the bond at the end of which only par is received. Ignoring the amortization adjustment, the current yield is 3.9%, derived simply by dividing current price into the coupon rate of 4 (or $40 on each $1000 debenture). The debentures are worth only $88.53 (for each $100 principal amount) in terms of its common value into common stock as against a current price of 103½. Clearly, it would not now be advantageous to convert. A minimum price of $50.71 for the General Telephone common would be required before the conversion value of the stock received would equal the purchase price of 103½. The "estimated investment value" of 95 is the approximate price at which the debenture might sell if it did not have the "sweetness" of a conversion feature. The debenture holder is therefore paying an approximate premium of 9% over investment value in order to get the right to convert into common stock at some future date.

UNION CARBIDE

Union Carbide, a "true-blue chip" of long standing, ranks as the nation's second largest chemical company with broad participation in many phases of this rapidly growing industry. In 1956, the company reported record sales of $1.32 billion

and net income of $146.2 million or $4.86 per share to which should be added 50 cents per share in accelerated amortization.

Ten years ago, in 1947, Union Carbide's sales were $521.8 million while earnings were $2.66 per common share. Dividends have been paid in each year since incorporation in 1917.

Sales in 1956 were distributed as follows: Chemicals 28%, Alloys and Metals 25.3%, Plastics 20.1%, Industrial Gases 14.4% and Electrodes, Carbons and Batteries 12.0%.

The Chemical Division produces over 400 synthetic organic chemicals having a multitude of applications in almost every industry. Raw materials for synthetic detergents, pharmaceuticals, synthetic fibers (Dynel) and a host of other products are manufactured by this Division. Research on new chemical products is intensely sustained; in 1956 alone, 44 new chemicals were marketed. Taking 1947-49 as a base, sales of this division by 1956 had increased by 135%.

The Alloys and Metals group produces over 100 different alloys and metals used in the production of steel, cast iron, aluminum, copper and bronze. Key minerals such as chromium, vanadium, manganese, boron, zirconium, titanium, and tungsten are used in making this division's products. Prospects for this division are most promising because of the growing emphasis on new metallurgical techniques necessary for the production of nuclear energy and guided missiles in particular. Compared with the 1947-49 base period, Union Carbide's Alloys and Metals group has produced a 130% sales gain.

The Plastics Division produces more basic types of plastics than any other company in the industry. The development of new uses for plastic materials continues unabated with the current favorite being polyethylene. In 1956, the company took a big step forward in having developed a process which substantially improves the clarity of polyethylene film. A new high-impact polystyrene molding compound is finding a promising market in the currently featured "non-breakable" portable radio cabinets. This division's sales have increased by 193% since the 1947-49 base period.

The Industrial Gases and Carbide Division produces gases such as oxygen, nitrogen, argon, krypton, neon and xenon. Linde Air Products, as the Division is known, sells the greatest part of its output to the metals industry for the cutting, shaping, heat-treating and welding of metals. Argon should find an especially promising outlet in titanium refining while acetylene is expected to find growing usage as a chemical intermediate as well as in its traditional cutting and welding applications. Sales of this division have expanded by 91% since the 1947-49 base period.

The Electrodes, Carbons and Batteries group is best known for its lines of *Eveready* batteries and flashlights and *Prestone* and *Trek* antifreeze. Carbon and graphite electrodes are used to provide power in electric furnaces for the production of ferro-alloys, steel and chemicals also provides an important source of revenues. An 85% increase in sales over the base period had been achieved by this division by 1956.

With an eye to the future, the company has established the Union Carbide Nuclear Company. Currently this division is occupied mainly with

Union Carbide Corp.			
Price	$117⅜	Capitalization (12/31/56)	
Indicated Dividend	$3.60	Long-term Debt	$410,515,000
Yield	3.1%	Common Stock	30,088,510
1957 Price Range	$118½-100⅝		
Traded	N.Y.S.E.		

supplying uranium to the nuclear energy industry. Extensive mining properties in the West and two uranium ore processing mills are now operated. Two new processing mills and two ore receiving and chemical upgrading plants are currently under construction. Union Carbide also operates the A.E.C.'s gigantic gaseous diffusion plants (for the separation of U-235 from natural uranium) at Oak Ridge, Tennessee and Paducah, Kentucky. More recently, the company announced that it will construct a nuclear reactor at a new nuclear laboratory at Sterling Forest, New York. This reactor will be used for intensive experimentation in many phases of the atomic energy program. The preparation of radioactive isotopes for industrial use and research into methods of recovering spent reactor fuels, have special long-term promise as commercially rewarding endeavors.

With a long record of sustained earning power, strong financial condition and a forward looking program of research and capital expansion, the shares of Union Carbide are considered to be of high investment quality and suitable for those investors seeking long-term growth in an important and growing industry.

Message: **WHILE YOU WERE OUT**

Mrs. Amadeo phoned that the prescription actually seems to irritate her little boy's ivy poisoning. He may be sensitive to the local anesthetic, so I played it safe and suggested she use Calmitol until you returned.

B.N.

TIME: 9:10 a.m.

TELEPHONED	X	PLEASE CALL		WILL CALL AGAIN	

I called Mrs. Amadeo last night after hours. Calmitol appears to relieve the itching without complications and I told her to continue it. How is our office supply of Calmitol?

E.C.N.

✻ CALMITOL® is the non-sensitizing antipruritic ointment supplied in 1½-oz. tubes and 1-lb. jars, and (liquid) 2-oz. bottles by THOS. LEEMING & CO., INC., New York 17.

Kynex Tablets & Syrup *(Lederle)*

Each tablet contains 500 mg., and each 5 cc. teaspoonful contains 250 mg. of sulfamethoxypyridazine, for high, prolonged blood levels with ¼ the usual sulfa dosage. *Indications:* For treatment of sulfa-sensitive genito-urinary infections, dysentery, respiratory infections and rheumatic fever. *Dosage:* Adult dose is 2 gm. (4 tablets or 8 teaspoonsful of syrup) initially followed by 0.5 gm. (1 tablet or 2 teaspoonsful of syrup) twice daily, 12 to 24 hours after the first dose. *Supplied:* Tablets, in bottles of 24 and 100. Syrup in 4 oz. bottles.

Corplex *(Chicago Pharmacal)*

A capillary protectant for restoration and maintenance of normal capillary integrity. Each tablet contains lemon bioflavanoid complex, 100 mg., and vitamin C, 100 mg. *Indications:* In disorders complicated by impaired capillary function, as habitual abortion, hemorrhagic conditions, upper respiratory infections. In hypertension and diabetes where complicated by rupture of capillaries in retina, brain or other vital organ. *Dosage:* Two tablets 4 times daily for 1 week, then 1 tablet 4 times daily. *Supplied:* In bottles of 100 and 1,000 tablets.

Disipal Tablets *(Riker)*

Each tablet contains 50 mg. of 2-dimethylaminoethyl 2-methylbenzhydryl ether hydrochloride. *Indications:* For the treatment and/or relief of Parkinsonism, spasmolysis of voluntary muscle in low back syndromes due to herniated lumbo-sacral disc, shoulder-hand syndrome, cerebral palsy. *Dosage:* One tablet 3 times daily. *Supplied:* In bottles of 100 and 500 tablets.

Metashal Ointment & Lotion *(Stiefel)*

The ointment contains 8.7% shale tar in a washable petrolatum base. The lotion contains 18% shale tar in zinc oxide-talc shake lotion. *Indications:* For the treatment of atopic dermatitis, dermatitis venenata, psoriasis, lichen simplex chronicus, and infectious eczematoid conditions. *Supplied:* Ointment, in jars of 2 and 4 oz., and 1 pound. Lotion, in bottles of 2 and 4 fluid oz.

Doxinate 240 Mg. Yellow *(Lloyd)*

Each capsule provides 240 mg. dioctyl sodium sulfosuccinate. *Indications:* For fecal softening in constipation. *Dosage:* Adult dose is 1 capsule daily. *Supplied:* In bottles of 15 and 100 capsules.

Percobarb *(Endo)*

A combination of the analgesic, Percodan, and fast acting hexobarbital. Provides onset of relief from pain within 15 to 20 minutes, usually lasting for about six hours. *Indications:* Pain. Provides mild daytime sedation. *Dosage:* Average adult dose is one capsule every six hours. *Supplied:* Bottles of 100 and 500 capsules.

Biomydrin Ophthalmic *(Nepera)*

Dual antibiotic with analgesic, anti-inflammatory and anesthetic actions. *Indications:* External ocular infections, allergies and inflammations. *Supplied:* 10 cc. bottles with Dropamatic plastic dispenser.

Bidrolar *(Armour)*

Each coated tablet contains ⅔ grain of dioctyl sodium sulfosuccinate purified and 1 grain of Ox Bile Extract, N.F. *Indications:* Constipation. *Dosage:* Adults, 1 or 2 tablets once or twice daily. Children, 6 to 12 years of age, one-half of the adult dose. Tablets should be taken with full glass of water. *Supplied:* Bottles of 100 tablets.

Peritrate Sustained Action *(Warner-Chilcott)*

Each tablet combines 20 mg. of Peritrate (plain) with 60 mg. of Peritrate in a special wax base which gradually releases over a 12-hour period. *Indications*: For coronary vasodilation, reduces frequency and severity of angina pectoris attacks. *Dosage:* Two tablets daily, at 12-hour intervals. *Supplied:* In bottles of 100 and 500 tablets.

Neo-T-Cain *(Chicago Pharmacal)*

Three-way action is provided by the special blending of anesthetic (Benzocaine), antihistamine (Propheniramine Maleate), and antibiotics (Tyrothricin and Neomycin), to increase the range of therapeutic activity. *Indications:* For adjunctive therapy in treatment of the common cold, laryngitis and minor throat and mouth affections. *Supplied:* In tubes of 10 lozenges, and cartons of 12 tubes.

Imferon *(Lakeside)*

Intramuscular iron-dextran complex providing the equivalent of 50 mg. of elemental iron in each cc. Produces a rapid rise in circulatory hemoglobin and re-establishes iron reserves. *Indications:* Patients intolerant or resistant to oral iron therapy; where a rapid hemoglobin response is necessary as in the last trimester of pregnancy; infants and uncooperative geriatric or psychiatric patients; selected cases of hemorrhage. *Supplied:* 2 cc. and 5 cc. ampuls.

Neocholan *(Pitman-Moore)*

Each tablet contains 265 mg. of dehydrocholic acid compound (dehydrocholic acid, 250 mg.), 1.2 mg. of homatropine methylbromide, and 8.0 mg. of phenobarbital. *Indications:* Chronic constipation. When biliary stasis is the underlying cause, the symptom of intestinal "stasis" is also relieved. *Dosage:* 1 or 2 tablets three times a day with meals usually constitutes effective dosage. *Supplied:* Bottles of 100 and 1,000 tablets.

Outcome of Solitary Pulmonary Nodule Discovered in an X-ray Screening Program

A series of 88 persons with solitary pulmonary nodules were studied. The median period of observation was 53 months.

These nodules were observed more frequently among men than women, among whites than Negroes, and among those over 40 years of age than among those under this age. They were associated with histoplasmin sensitivity, but not with tuberculin sensitivity.

Only four carcinomas were diagnosed, all among white males. Five nodules were demonstrated to be tuberculous, and two were granulomas of undetermined etiology.

Among nine nodules with a diameter greater than 28 mm., three were carcinomas, and three tuberculosis. No carcinoma or tuberculosis was demonstrated among those with either calcification or lamination.

Ten of the 88 persons are known to have died, five from causes apparently related to the pulmonary nodule; three of these deaths were due to carcinoma, and two to tuberculosis. The observed number of deaths was two or three times the expected number, and the excess appeared to be due to carcinoma and tuberculosis.

It is suggested that neither routine observation nor indiscriminate excision should be recommended, and that further knowledge regarding the fate of these lesions—those excised as well as those not excised—would help delineate the risks involved in various methods of treatment. With such information, the management of persons with solitary pulmonary nodules could be placed on a more rational basis than is now possible.

Comstock, G. W., et al., *New England J. Med.*, 254: 1018-1022,1956.

Viral Pneumonias

Viral pneumonias are clinically delineated entities and outnumber all other pneumonias. They are typical in their own right and atypical only if compared with lobar pneumonia. The adjective viral is as appropriate as the adjectives, bacterial or mycotic, for their respective pneumonias.

Now that the viruses of some forms of viral pneumonia have been isolated and cultivated, specific immunity has been demonstrated, infection can be modified by specific vaccine, and the diseases can be transmitted experimentally, Koch's postulates are more than fulfilled. It is time to abandon the name, primary atypical pneumonia.

Reimann, H. A., *J.A.M.A.*, 161:1078-1079,1956.

FAST RELIEF *is essential*

WIGRAINE

RELIEVES MIGRAINE QUICKLY

If taken at the first indication of prodromal symptoms, Wigraine relieves migraine headaches in a matter of minutes. And because the Wigraine tablet disintegrates quickly, and acts promptly, less medication is required to control the complete syndrome.

Wigraine combines, in an uncoated tablet, ergotamine tartrate and caffeine to control vascular headache; belladonna alkaloids for nausea and vomiting; and acetophenetidin to relieve occipital muscle pain.

Formula: Each Wigraine tablet contains 1 mg. ergotamine tartrate, 100 mg. caffeine, 0.1 mg. of belladonna alkaloids (levorotatory)* and 130 mg. acetophenetidin.

Supplied: Individually foil-stripped and packaged in boxes of 20. Send for complete descriptive literature.

**87.5% hyoscyamine, 12.5% atropine, as sulfate.*

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Hypothalamic Coma

This coma differs from the usual coma in that there is no evidence of paralysis, or of other signs of regional involvement of the brain and brain stem. It may rapidly end fatally, or it may persist unchanged for long periods of time. Generally it terminates in death, but if recovery takes place, no residua are present. Among the symptoms observed are a sharp drop in blood pressure in known hypertensives, and temporary fluctuation in either direction where no previous hypertension existed.

The coma may alternate with restlessness, excitement, and unconscious sexual manifestations. Excessive sweating may occur in the absence of fever. There may be quickening or slowing of the pulse for no apparent reason. Fever, often high, is of cerebral origin, and it may be seen in the absence of infection and without parallel rise of pulse rate. It is not accompanied by leucocytosis, sweating, and heightened sedimentation rate, and it is not responsive to the usual antipyretics. It may respond to barbiturates, especially sodium thiopentone, which appear to have some selective affinity for the diencephalon. Polydipsia and polyuria may occur from involvement of the tuber cinereum. Transient glycosuria or hyperglycemia may occur in non-diabetics. Occasional petitmal autonomic seizures and, more rarely, grand-mal attacks may also occur.

The prognosis generally is very grave. In vascular disease, recovery may take place. In tumors in or near the interbrain, the outlook depends on the possibility of surgical removal; generally it is hopeless. In inflammatory conditions, recovery may take place after many weeks provided excitement can be controlled and nutrition maintained.

Wechsler, I. S., *Brit. M. J.*, 4989:375-378,1956.

Carcinoma of the Lung

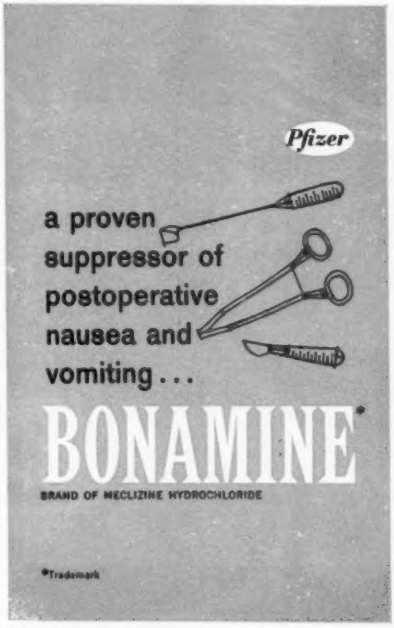
Any patient with a persistent cough, hemoptysis or wheezing deserves an adequate x-ray study, and if necessary, a bronchoscopic examination. Other suspicious symptoms are weight loss, thoracic pain, dyspnea and hoarseness.

Thompson, J. V., *J. Indiana M. A.*, 49:393-397, 1956.

In Case You Are Asked

Kartagener's syndrome is situs inversus, bronchiectasis and sinusitis.

Maret, R., et al., *M. Ann. District of Columbia*, 25: 12,668-672,1956.



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Low Toxicity of Carbimazole

A survey of 1,046 patients who were treated with carbimazole for a mean duration of 9.2 months showed that 0.5% developed major, and 1.5% minor, toxic reactions. All of these reactions occurred within the first two months of carbimazole administration; none on dosages of less than 20 mg. a day. Six of the 21 affected patients gave a history of previous allergic disease.

A comparison was made with the incidence of major toxic reactions reported with other antithyroid drugs: methylthiouracil, 9.2%; thiouracil, 5.4%; methimazole, 1.45%; and propylthiouracil, 0.9%.

The toxic effects of carbimazole can usually be readily recognized and controlled. After serious toxic effects, drug therapy can be continued, where necessary, with perchlorate. Probably, perchlorate should be reserved for this use because it has a potentially less smooth antithyroid control.

Burrell, C. D., et al., *Brit. M. J.*, 4981:1453-1456, 1956.

Measurement of Blood Pressure in Obese Persons

Falsely high blood pressure readings may be obtained in people with obese arms. In the very obese, the true blood pressure may be more accurately determined by using the forearm. Tissue composition as well as arm circumference may contribute to the erroneously high registration. The forearm technique, the standard 13 cm. cuff on the forearm with its midpoint 13 cm. from the olecranon process and blood pressure determined by auscultating the radial artery, appears to give accurate systolic and diastolic readings.

Trout, K. W., et al., *J.A.M.A.*, 162:970-971, 1956.

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Technique of Venisection

Venisection is useful as a measure for taking a load off a failing heart when the patient is suffering from acute dyspnea and pulmonary edema (acute left ventricular failure), or when venous enlargement is very great (right heart failure). With a venous tourniquet or a sphygmomanometer cuff round the upper arm, and preferably through locally anesthetized skin, a large-bore needle is inserted into a suitable vein. The needle may be connected to 18 inches of rubber tubing leading into a receptacle on the floor. The blood usually flows quickly (500 cc. in five minutes).

In severely ill or moribund cardiac patients, the arm veins may contract down to mere threads. Then use may be made of the engorged internal jugular vein, which can be entered at a depth of an inch just above the right clavicle between the heads of the sternomastoid muscle. It is useful to anesthetize the track with a small hypodermic needle, which can be passed inwards until it penetrates the vein. This gives an indication of the vein's position and depth.

Brit. M. J., 4982:1556,1956.

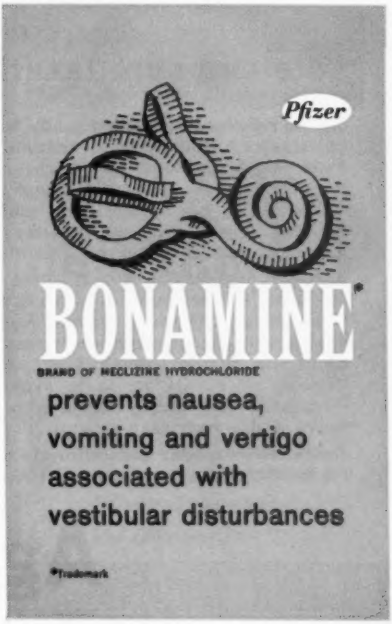
Hematoma of the Rectus Abdominis Muscle as a Fatal Complication of Anticoagulant Therapy

A woman, 83 years of age, was seen in 1954 when she had arteriosclerotic heart disease with mild failure. There was a satisfactory response to therapy. A year later, gangrene of the left third toe began to develop. Anticoagulant therapy was started. Two tablets of Coumadin administered initially and one tablet every third day thereafter. There were no further complaints except for abdominal pain which had begun five days after institution of the anticoagulant therapy. Her family physician found a mass, exquisitely tender in the lower left quadrant. The patient vomited several times. The abdomen was not rigid, and no distinct evidence of bleeding was noted. Before the patient could be moved to a hospital, she expired.

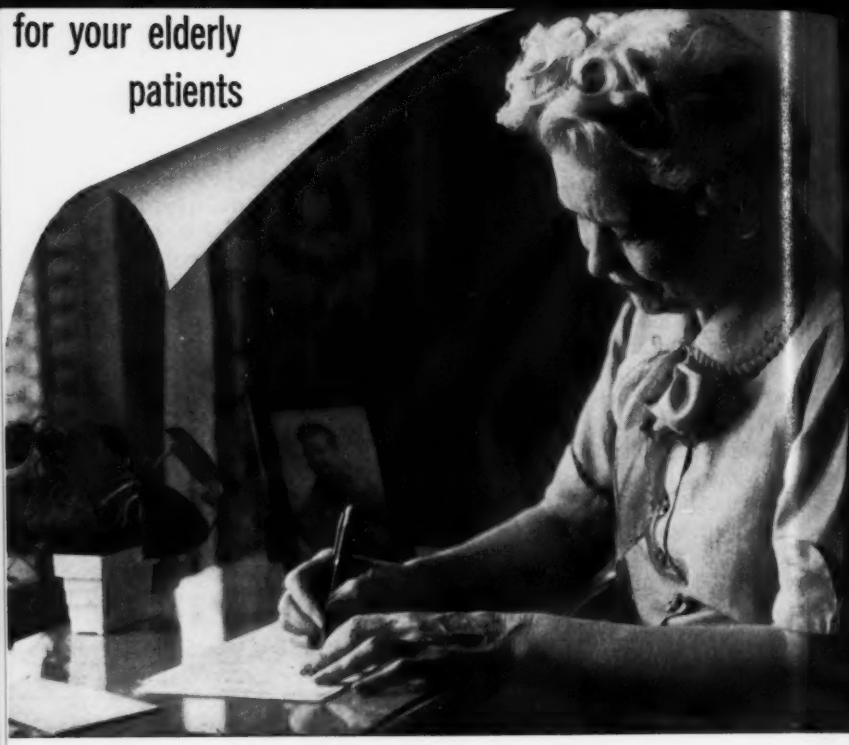
At autopsy, a hematoma was found which extended from the costal margin to the symphysis pubis, primary within the sheath of the rectus, extending into the left broad ligament, over the uterus and, to a slight extent, into the right broad ligament, laterally between the abdominal muscles and fascia, to involve the left psoas.

There was at least 2000 cc. of clotted blood in the abdominal wall.

Hobbs, M. L., et al., *West Virginia M. J.*, 52:197-199, 1956.



for your elderly patients



safe and sure laxation

Agoral relieves constipation gently, without strain. A dose taken at bedtime almost always produces results the next morning. A patient taking Agoral can follow his or her normal daily routine because Agoral does not provoke the sudden urge induced by strong laxatives.

Excellent in geriatrics, Agoral solves one of the major, recurrent problems in this field, acting gently and positively. Agoral is also well suited to all other cases of acute and chronic constipation, where straining or purges are to be avoided: Postoperatively, during and after pregnancy, and in bedridden patients.

Agoral mixes readily and uniformly with the intestinal contents during its passage through the tract. It aids in the retent of fluid in the fecal column, affords lub cation and provides mild peristal stimulation. Agoral causes no sudd uncomfortable griping, distention stomach distress. Used for prompt rel it is nonhabit-forming and may be pr scribed for protracted periods.

Dosage: At bedtime, ½ to 1 tablespoo ful. Contraindications: Symptoms appendicitis; idiosyncrasy to pheno phthalein.

Supplied: Bottles of 6, 10 and 16 flui ounces; and as Agoral Plain (witho phenolphthalein), bottles of 6 and fluidounces.

Agoral® *the laxative to meet all nee*

mineral oil emulsion with phenolphthalein

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Treatment of Iron-deficiency Anemia

Iron stores can be effectively replaced by oral iron. When the hemoglobin percentage reaches normal limits, the intestinal mucosa effects the passage of sufficient quantities of iron to replenish iron stores but, except in rare pathological disorders, acts as a barrier to large quantities and so protects the body from siderosis. It is therefore important to work out the doses of parenteral iron carefully. Periodic oral iron is safer than parenteral iron in all but those cases which cannot be returned to normal with oral therapy.

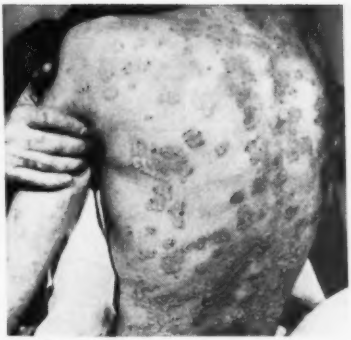
Cope, E., et al., *Brit. M. J.*, 5006:1428,1956.

Effect of Cigarette Smoking on Gastric Secretions of Patients With Duodenal Ulcer

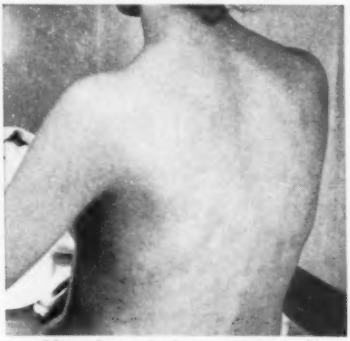
The first and more extensive part of this investigation was of 120 patients with duodenal ulcer who were divided into two equal groups. Sixty patients smoked for a period of 30 minutes, and 60 patients refrained from smoking during this study, acting as "controls." Comparison between the "smokers" and the "controls" revealed no significant differences in volume, pH, "free acid," peptic concentration or peptic output.

The second series involved 27 patients; 11 had previously had a partial gastrectomy for duodenal ulcer, and 16 were being prepared for that operation. The pH of the gastric juices was determined for basal, smoking, broth-stimulation and insulin-stimulation periods. It was found in both groups that the pH was elevated during the smoking period.

Cooper, P., et al., *New England J. Med.*, 255:17-21, 1956.



Psoriasis of 5 years duration



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RESYDESS strikes at the underlying causes of obesity:

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2. It relieves stress and anxiety tension believed by many to be a primary reason for compulsive eating, through the potent tranquilizer—Reserpine.

Tandem action of the teamed ingredients successfully checks the desire for excess food and simultaneously keeps the patient calm but alert.

Each RESYDESS tablet contains:

Reserpine.....0.1 mg.
***dl*-Desoxyephedrine Hydrochloride....8.0 mg.**

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Indications For Cesarean Section

Cesarean section is the method of choice in cases of central placenta praevia, and in most cases of partial praevia. In some cases of bleeding due to premature separation, in a primipara with a long closed cervix and any degree of separation, section is probably indicated, unless delivery can be reasonably expected within an hour or two.

Once patients in severe toxemias are brought under medical control, they should be delivered by the easiest possible means. In those with long cervices, a section is much easier. Section is indicated in many cases of breech presentation in a primipara. If x-ray pelvimetry shows a smaller than average pelvis, and an average or larger baby is anticipated, section is justified. Transverse lie of the fetus is almost always a reason for cesarean section, no matter what the parity. Some believe "once a section, always a section"; others that all patients should have a good test of labor before a repeat operation.

Prolonged labor, *per se*, is an indication for section—if a patient with a normal pelvis and baby continues in labor 24 to 36 hours without progress, section should be done after both rest and stimulation have proved to be of no avail.

There is no reason for routinely employing sections in elderly primiparas. They should be treated as are younger patients. Very few will require section for any reason.

The most important *medical* reason for Cesarean section is diabetes. Patients with various types of malignancy may require section. The cardiac patient tolerates labor much better than she does surgery. Tuberculosis is not an indication for section.

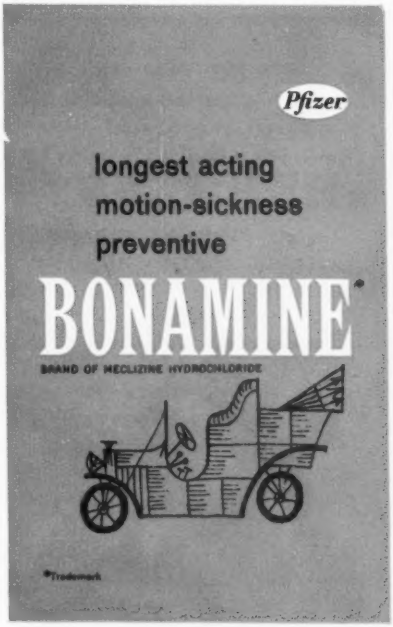
Patients with acute poliomyelitis tolerate section poorly, and preferably should be delivered vaginally. Muscle deformities from poliomyelitis almost never affect childbearing.

Rathbun, L. S., *North Carolina M. J.*, 17:447-448, 1956.

Effects of Mild Analgesics on Postpartum Pain

In investigations of the action of the placebo in pain, cough, or tension situations, the average satisfactory relief was 35%. Codeine or aspirin was given to 384 patients, a placebo to 371 patients, and unknown analgesics to 444 patients. A placebo relieved pain in 75% of these patients, codeine or aspirin increased this percentage to 85%.

Orkin, L. R., et al., *New York State J. Med.*, 57:1, 71-73,1957.



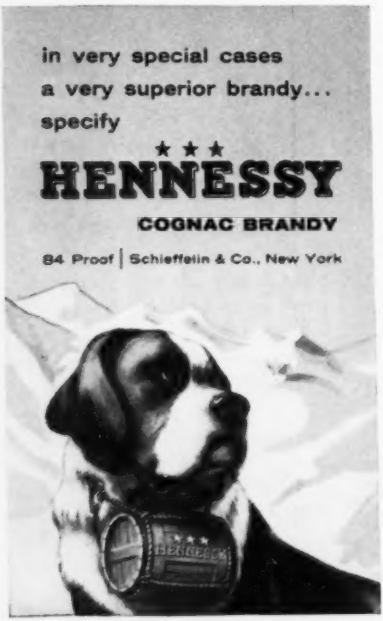
Fatal Agranulocytosis Due to Chlorpromazine

Of 1,508 patients treated with chlorpromazine at Elgin State Hospital, one developed fatal agranulocytosis. This is the only dyscrasia, as well as fatality, seen in connection with chlorpromazine at this hospital. The patient had shown no typical necrotizing ulceration during her course of illness.

Blood transfusions in cases of agranulocytosis seem contraindicated, tending to cause cardiac failure. The emphasis of the treatment should be on the antibiotic regimen, and possibly cortisone.

This case brings the total of blood dyscrasias described in connection with chlorpromazine in the English and American literature to 49, and the fatalities encountered to 18.

Tuteur, W., *Illinois M. J.*, 110:236-238,1956.



Poison Ivy Vaccine

Prophylaxis for poison ivy is practical and effective. For a highly sensitive person, subcutaneous injections of oleoresin* from the poison ivy plant are given at intervals of seven to fourteen days.

As a curative therapy in the highly sensitive, injections of ACTH may be given for two or three days; for severe cases, gradually decreasing doses of prednisone or prednisolone may be used for five to seven days after the ACTH therapy.

It appears that after three years of treatment, the immunity may be lasting.

*Alum-precipitated pyridine-ivy extract (Aqua Ivy) available from the Allergy Laboratory, University Hospital, New York.

Gaillard, G. E., *New York State J. Med.*, 56:2253, 1956.

Acute Leukemia

Evidence suggests that the occurrence of leukemia in persons over 50 years of age is actually increasing, whereas in younger people the apparent rise can be largely accounted for by better diagnosis. Analysis of the death certificates of 553 patients recorded as having died from leukemia showed that 57% of the deaths occurred in patients over 50 years of age; that 60% of all leukemias were acute; and that 46% of acute leukemias occurred after 50 years of age.

Investigation of a selected group of 97 patients past 50 years of age who were dying from acute leukemia suggested that the clinical, hematologic and histologic features of the disease are distinctive. They can be differentiated both from those of acute leukemia in younger patients, and from chronic leukemia.

Gunz, F. W., et al., *Blood*, 11:882-901,1956.

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KUTAPRESSIN IN RHUS DERMATITIS

New Parenteral Treatment for Poison Ivy

Unique Liver Derivative for Rapid Relief in the Poison Ivy, Poison Sumac and Poison Oak Regimen

Well known for its effectiveness in treatment of acne, urticaria and other skin disorders, KUTAPRESSIN* was found to be of great value in treatment of the common types of rhus dermatitis such as poison ivy, poison sumac and poison oak.

The poison ivy reaction is characterized by severe itching, pain and exudation. Various local applications, antipruritic and antihistaminic drugs, ACTH and Cortisone have been used previously in an attempt to control the symptoms. In many instances, however, when only the symptoms were being treated, there were recurrences of the disorder as soon as treatment was discontinued and in some, sensitivity to the drug developed.

Clinicians employing KUTAPRESSIN in treatment of ivy dermatitis found—after a single injection—vesicles and bullae were rapidly ameliorated and that itching and pain subsided. One or two additional injections resulted, in most cases, in a complete clearance of symptoms with no recurrences.

It is thought that KUTAPRESSIN acts by causing mild vasoconstriction of the dilated terminal vessels thus improving integrity and reducing permeability of these blood vessels.

Kozelka and Marshall, reporting in the May, 1956 issue of *Clinical Medicine*, state: "We believe the best current therapeusis for the adequate treatment of poison ivy dermatitis is with daily injections of Kutapressin."

KUTAPRESSIN may be given intramuscularly or subcutaneously. The usual dose is 2 cc. daily until maximum response is obtained. Some clinicians have reported that larger dosage (up to 5 cc.) gives more rapid recovery.

KUTAPRESSIN is supplied in 2 cc. ampuls, 10 cc. and 20 cc. multiple dose vials. KREMERS-URBAN COMPANY, Milwaukee 1, Wisconsin. Literature is available on your request.

*Derivative of liver which acts selectively on arterioles and capillaries without raising systemic blood pressure.

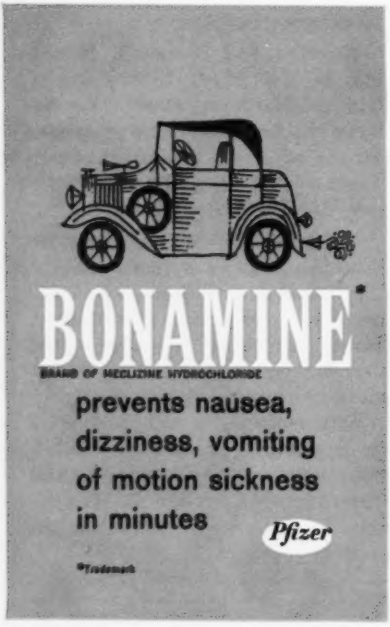
Pyridoxine (Vitamin B_6) in Alcoholism

Seventy cases of alcoholic intoxication were studied without selection. Vitamin B_6 (Pyridoxine H Cl), 500 mg., was given twice a day to 35 patients and 35 patients were used as controls. All received 5% glucose with one ampule of multivitamins in each 1000 cc., dilantin, 100 mg. three times daily, and paraldehyde, 10-20 cc. s.o.s at night.

There was no significant difference in the recovery rate of the group treated with vitamin B_6 and of the controls. The excretion rate of alcohol was not altered by B_6.

There was no observed beneficial effect or alteration in the course of those cases with psychoses and/or convulsions.

Atkinson, G. W., et al., *Virginia M. Monthly*, 83: 391-393,1956.



Effects of a Combined Antibiotic Ointment in Pyodermas

In treatment of pyodermas, the material used was zinc bacitracin 200 units, neomycin base (as the sulfate) 3 mg., polymixin B 4000 units, and benzalkonium chloride 5 mg. — per gram of special hydrocarbon base.

Each patient was instructed to cleanse the involved area with plain water, remove crusts, compress the area 20 minutes with a 1% saline solution, dry, and apply the ointment lightly three times daily.

Of 192 patients, 54 failed to return after one, two, or three visits.

All cases that failed to clear within seven to eight days were re-investigated. In cases of folliculitis of the beard and scalp, ecthyma, and infected traumatic ulcers, the extended course of therapy was not unusual.

The ointment affords an effective and safe agent in the management of pyogenic skin infections of multiple bacterial origin.

Stubenrauch, G. O., et al., *J. Indiana M. A.*, 49: 1063-1065,1956.

Benign or Functional Right Bundle Branch Block

The ECG of right bundle branch block is frequently seen in patients who have no demonstrable heart disease. Too many such patients have been advised to retire or seek easier work.

It is urged that bundle branch block, particularly of the right bundle, in the absence of demonstrable heart disease, be termed "Benign or Functional Bundle Branch Block."

Such patients must be advised that this condition is benign, but that they should have periodic examinations.

Goldman, I. R., *J. Tennessee State M. A.*, 49:77-78, 1956.

briefs: DIAGNOSTIC

Chronic Urticaria

The recurrent, asymmetrical, evanescent, discrete, raised wheals offer little difficulty in diagnosis. Subjective complaints vary from negligible to severe.

Angioneurotic edema differs in that it is located in the deeper layers of the corium and the subcutaneous tissues; this causes tingling and numbness rather than pruritus. Swelling disappears more slowly in response to adrenergic and antihistaminic drugs. Elephantiasis nostras, a streptococcic lymphedema, may be confusing, especially when it involves the upper lip. When the eruption is under belt and shoulder straps, diagnosis of pressure urticaria can be made. "Urticaria" may be pruritus of diabetes, scabies, or insect bites.

Chronic urticaria is most frequently caused by drugs, foods, or infections. Rarely the contactants, physical agents, inhalants, diabetes, syphilis, brucellosis, malignancy, lymphomas, and insect bites, are responsible.

In the case of inhalants, hyposensitization is sometimes necessary. In physical allergy, histamine and histamine-azoprotein are sometimes helpful.

In the symptomatic care of patients with urticaria, adrenergic drugs such as epinephrine and ephedrine, antihistamines, intravenous aminophylline, and nicotinic acid are most valuable.

Under the most expert care, some cases go unsolved. Chronic urticaria is subject to spontaneous remissions, and this must be the reason for the long list of agents recommended for chronic urticaria.

Caplin, I., *J. Indiana M. A.*, 49:1066-1069,1956.

Rovsing's Sign

Rovsing's sign, when positive, denotes that there is a lesion in the right iliac fossa which gives rise to pain when the parts are disturbed by pressure; such a lesion will nearly always be inflammatory.

Pressure by the hand on the left iliac fossa causes movement of the small gut over towards the right iliac fossa, thus disturbing the contents of the latter by *movement* (while the hand sinks into the left iliac fossa) and by *pressure* (when the palpation is maintained).

Having pressed deeply the left iliac fossa, then press medially deep to the rectus muscle to exert pressure on the right iliac fossa contents. If such pressure does not give the right iliac fossa pain, then pressure nearer the midline may well do so. The point is that the patient indicates pain at a place other than where the pressure is being directly applied.

"...Dramamine nevertheless proved more effective than other methods hitherto employed in the concededly difficult management of nausea and vomiting of pregnancy."

Cartwright, E. W.: Dramamine in Nausea and Vomiting of Pregnancy, West. J. Surg. *59*:216 (May) 1951.

Dramamine®

Brand of Dimenhydrinate

SEARLE

The *rebound* sign is caused by movement of an inflamed part back to its normal position. Direct pressure in the right iliac fossa on the normal part can give pain, but a normal part will *not* give pain when allowed to return to its usual position on sudden release of the pressure. The Rovsing and rebound signs can, of course, be combined where sudden release of the left iliac fossa pressure gives pain felt in the right iliac fossa due to movement of the inflamed parts.

Taylor, E. E. T., *Brit. M. J.*, 4986:243-244,1956.

Leprosy Diagnosed as Syringomyelia

Although early diagnosis is important in leprosy, the disease is liable to be overlooked owing to its rarity. The occasional resemblance of neural leprosy to syringomyelia is of interest, and it is noteworthy that, whereas accounts of syringomyelia rarely include leprosy in discussing differential diagnosis, almost all accounts of leprosy refer to syringomyelia.

In leprosy, the sensory loss usually includes all forms of sensitivity, although as discrimination between heat and cold is lost first at an early stage, the anesthesia may appear to be disassociated. It is often of "glove" distribution, but in syringomyelia this type of distribution of sensory loss is uncommon.

In syringomyelia, there is almost invariably depression of one or more of the reflexes in the upper limbs by the time wasting is pronounced, but in leprosy the reflexes are preserved and may even be exaggerated. The most valuable confirmatory sign of neural leprosy is palpable thickening of peripheral nerves.

Lucas, C. J., *Brit. M. J.*, 4986:214,1956.

briefs: OBSTETRIC

Obstetric Oxygenation

It is believed that most complications in the newborn are due to anoxia, rather than to mechanical injury. In an endeavor to prevent intrapartum anoxia, 100% oxygen was administered to 799 unselected patients before and during delivery of 791 single infants and 8 pairs of twins.

The most significant advantage of routine oxygenation was observed among the 63 deliveries assisted by midforceps in the series. In this group, there was neither mortality nor morbidity.

Pudendal block and local infiltration anesthesia, facilitated by hyaluronidase and combined with reasonable analgesia, constitutes the safest, simplest, and most effective means of making possible routine use of oxygenation during parturition.

Dunlap, J. C., *Texas State J. Med.*, 52:806-809, 1956.

Intramuscular Iron Therapy in Anemia of Pregnancy

In 200 antenatal cases and 100 postnatal cases of iron-deficiency anemia treated with intramuscular iron (Imferon), results were very satisfactory. Except in very stout patients, the utilization of the iron is as good as that obtained with saccharated iron oxide.

In calculating the amount of iron necessary, allowance has to be made for the fetal demands and for the increase in maternal blood volume. The average case requires an additional 300 mg.

It appears that intramuscular iron causes a temporary hemodilution and, to begin with, masks any rise in hemoglobin. These patients require more iron—before the 28th week, an additional 400 mg.; after that, an additional 200 mg. is usually sufficient.

Reactions are less than 0.5%. It should first be established that the patient has a simple iron-deficiency anemia and that there are no complicating factors, such as infection, affecting erythropoiesis. It is inadvisable to treat any patient giving a history of asthma or of allergic skin rashes. We would not now recommend administration by the intravenous route.

Scott, J. M., *Brit. M. J.*, 4993:635-638, 1956.

Treatment of Leg Cramps

Neo-Calglucon Syrup, a highly concentrated calcium preparation, is well absorbed and palatable. Of patients receiving a vitamin mineral supplement, 30.6% did not obtain complete relief from leg cramps. Of 98 women complaining of leg cramps in pregnancy, 94% experienced complete relief with this syrup.

Brougher, J. C., *Northwest Med.*, 55:12,1356-1358, 1956.

Sudden Unexplained Death During Cesarean Section

The patient suddenly died while conversing with the anesthesiologist.

The impression that it was an air embolism through the placental site, during and after the "peeling" of the placenta from the lower uterine segment, was not confirmed by the pathologist. This apparent discrepancy disappears once it is realized that cardiac chambers can be emptied of air by massage. Absence of crepitation during cardiac massage does not disprove presence of air in the cardiac chambers. A similar type of obstetric death under anesthesia may be produced by massive amniotic fluid embolism. Amniotic fluid embolism usually begins before the third stage of labor, air embolism usually during or after the third stage. At autopsy, amniotic fluid embolism is readily revealed by the presence of decidual or amniotic fluid elements in the smaller pulmonary vessels. Air embolism may evade detection by the pathologist.

Air embolism is favored by uterine relaxation, abnormal placentation, manual removal of the placenta and deep head-down position. All of these factors were present in this case. When manual removal is necessary, the possibility or severity of air embolism may be diminished by avoiding the Trendelenburg position and by delaying manual removal of a placenta until use of oxytocics has contracted the uterus.

Recovery from air embolism has been known to follow rotation of the body into the left lateral position, or puncture and aspiration of the right auricle or ventricle.

New York State J. Med., 56:575-576,1956.

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By clearing the ugly patches of
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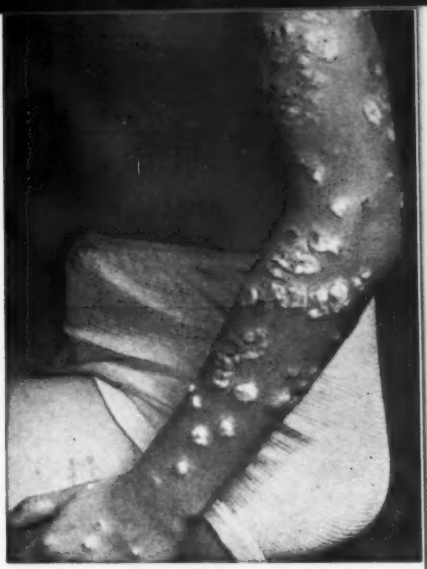

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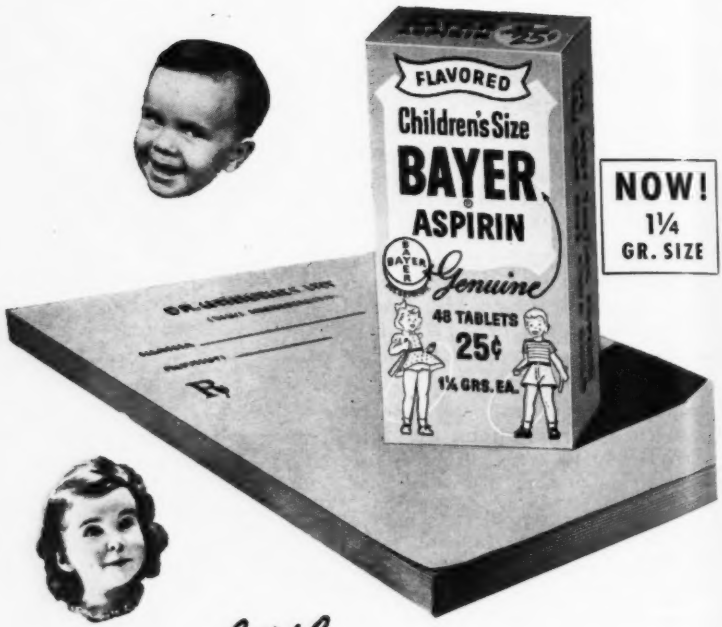

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by the Editorial Board—Charles E. Lyght, M.D., Editor; William P. Boger, M.D., George A. Cardin, M.D., Augustus Gibson, M.D., and Dickinson W. Richards, M.D., Merck & Company, Inc., Rahway, New Jersey. 1956

This edition of the Manual carries on the great tradition of supplying the essentials of diagnosis and treatment in general practice without waste of words or the time of the reader.

Clinical Use of Radioisotopes

by William H. Beierwaltes, M.D., Coordinator, Clinical Radioisotope Unit, University Hospital, Ann Arbor; Philip C. Johnson, M.D., Chief, Radioisotope Unit, Veterans Administration Hospital, University of Oklahoma Medical School; and Arthur J. Solari, M.D., Radiation Physicist for Clinical Radioisotope Unit and Kresge Research Isotope Unit, University Hospital, Ann Arbor. Illustrated. W. B. Saunders Co., Philadelphia & London. 1957. $11.50

This text was written to help instruct in the most common clinical uses of radioactive isotopes. The space given each subject was decided principally by the popularity of each use. It has been found that physicians in private practice request training in a clinical isotope unit for one of two reasons: the specialist to learn how to handle radioactive isotopes in his practice; the general practitioner to know the indications for their use, how to prepare his patients and how to manage them after isotopes have been administered.

All this information, as well as the knowledge required of medical students and interns, is supplied by this authoritative work.

Low-Fat Cookery

by Evelyn S. Stead and Gloria K. Karren, Dietitians, with an introduction by Eugene A. Stead, Jr., M.D. and James V. Warren, M.D. Illustrated by Frank Sieminski. The Blakiston Division, McGraw-Hill Book Company, Inc., New York, Toronto & London. 1956. $3.95

The authors tell us that this book is written primarily for well people who wish to eat less fat, either to control weight or in the hope of being less subject to cardiovascular disease. All kinds of food, from consomme to demitasse, are discussed. Methods of preparation are described for making foods more appetizing with less caloric content.

Pathologic Physiology: Mechanisms of Disease

edited by William A Sodeman, M.D., F.A.C.P., University of Missouri, Columbia, Missouri. Second edition. Illustrated. W. B. Saunders Company, Philadelphia & London. 1956. $13.00

Advances in knowledge of this fundamental subject, of prime importance in medicine, are being made with such rapidity that a new edition of this standard work was necessary. For this edition, much revision has been made, and the general sequence of the subject matter has been considerably altered. New chapters include one on genetics, growth and neoplasia, and one on the nervous system. The revision of the section on diabetes is regarded as a great improvement. No doctor could spend his money to better advantage than in the purchase of this book.

Women of Forty: The Menopausal Syndrome

by M. E. Landau, M.D., F.R.C.S. Philosophical Library, New York, N. Y. 1956. $2.50

An elementary booklet which may be of value to some women at the period of the menopause.

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